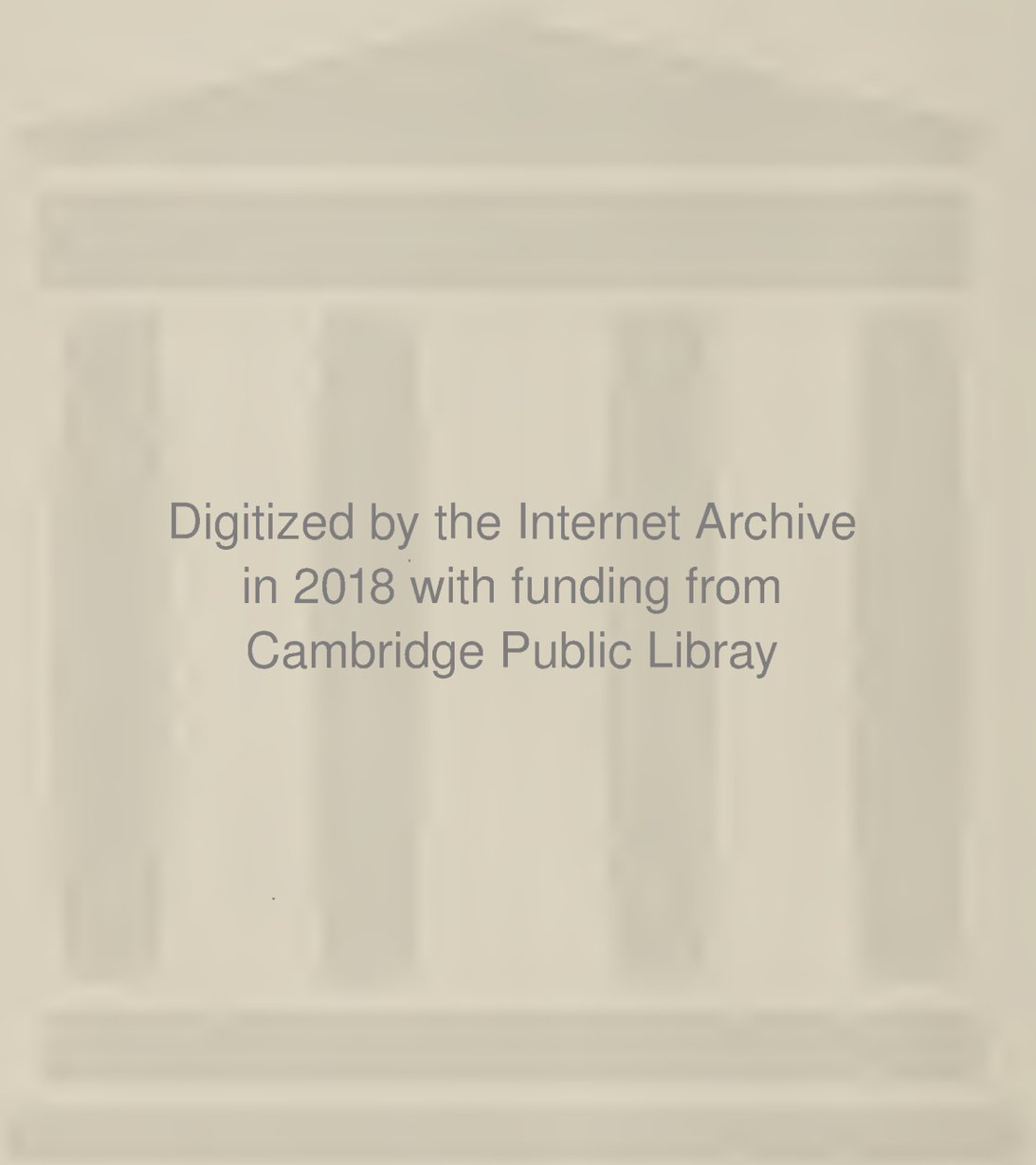

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Peabody School, Linnaean Street, corner Avon Street. Completed 1899.

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CITY OF CAMBRIDGE

THE MAYOR'S ADDRESS

AT THE

ORGANIZATION OF THE CITY GOVERNMENT

JANUARY 1, 1900

AND

THE ANNUAL REPORTS

MADE TO THE CITY COUNCIL

FOR THE YEAR 1899

PUBLISHED BY ORDER OF THE CITY COUNCIL
UNDER THE DIRECTION OF THE
CITY CLERK

BOSTON:
J. A. CUMMINGS PRINTING CO.
1900

ADDRESS

OF

HON. EDGAR R. CHAMPLIN

MAYOR

TO THE

CITY COUNCIL

January 1, 1900

Gentlemen of the City Council: —

Confronting us are the exercise of civic functions and the faithful discharge of their corresponding duties.

Ideas of municipal government have undergone a radical and fundamental change in many cities in this country and in England during the last quarter of a century. The political institution has waned and the business corporation has forged to the front. The absurdity of allowing partisan politics and national, or even State issues, to either select the members or control the actions of the City Government has become too apparent to admit of defense.

While Cambridge cannot, perhaps, claim to be the pioneer in, yet our adherence to this policy has become more and more pronounced, and our stockholders have selected us to be officers and directors of a great corporation receiving substantially $2,000,000 a year and to disburse the same for the best interest of the entire corporation. The questions for us to solve, the burdens for us to carry, the results for us to attain, relate simply and emphatically to business. In the expenditure of this $2,000,000, the problem to solve is, how can we obtain the largest dividends in the form of increased health, protection and comfort for the people within our territory. The City Government which most judiciously solves this problem is the one which most faithfully discharges its obligations to its constituency.

The equipping of our City with all modern conveniences and improvements, with good and clean streets, ample fire and police protection, increased school facilities, etc., at a minimum expendi-

ture is the principal task to which we should address our attention. The greater the amount of taxable property, the lower will be the tax rate in raising a stated sum. The desirability therefore of the increase in taxable property is apparent. Aside from the development of property possessed by our citizens, the only source to which we may look for an increase is the accretion furnished by new capital from outside, and the inviting to our city of non-residents, not alone by the attractiveness of the City, but by the establishment of a moderate tax rate.

As in the control of household expenses, so in the expenditures of a city, it is difficult to distinguish between necessities and luxuries. There are many things which we would like to possess; there are even many things which we ought to possess, which, however, cannot be acquired without an undue expenditure; but in the selection of the projects for which the City's money shall be expended, what fairly may be deemed necessities must be provided before luxuries are authorized.

Our tax rate last year was $17.10; this is too high for the best interests of the city and we should unite in an earnest effort to reduce the rate the present year. To accomplish this may not be possible, but we should approach the work of the year with the resolution to effect a reduction if within our power without an impairment of the best interests of the City.

BONDED INDEBTEDNESS.

Our gross bonded municipal debt (exclusive of the Water Department debt) is	$4,350,400.00
The amount of the Sinking Fund is . . .	930,733.90
Leaving a net municipal debt of . . .	$3,419,666.10

The net increase in the municipal debt in the last five years has been as follows:

1895, ...	$151,472.52
1896, ...	487,148.29
1897, ...	177,194.33
1898, ...	323,512.20
1899, ...	187,627.81

making a net average increase per year for five years of $265,391.03. It will therefore be seen that the increase in the

net bonded indebtedness for the year 1899 was about $136,000 less than the increase for the preceding year, and about $78,000 less than the average increase for the last five years.

The gross amount of City bonds issued last year amounted to $346,000. Of this sum the issue of $204,000 fairly may be said to have been rendered necessary by work begun before the administration of last year, viz. :

Cambridge Bridge,	$50,000
Parks,	100,000
Schoolhouses. "furnishings,"	37,000
Clay-lands,	17,000

While bonds amounting to only $142,000 were issued to pay for work initiated during the past year, viz. :

For improved Sewer System,	$42,000
For the remodelling of schools and the purchase of land for schoolhouses,	95,000
For the extension of Green Street,	5,000

And of this issue it fairly may be claimed that the needs of the City imperatively demanded the expenditure. The new Sewer System was a necessity, and it is believed that when our share of the expense of the Metropolitan Sewer shall be determined by meter, instead of as at present on a per capita basis, that the saving effected will more than meet the interest and Sinking Fund charges of this loan.

The defective construction of the Otis Street School House endangered the lives of children in the case of fire.

The Harvard and Morse Schools imperilled the health of pupils on account of defective sanitation, while fire substantially destroyed the Harvard School.

The further issuance of bonds for new projects must be approached with conservatism. During this year from the tax levy we must pay $343,000 for interest and sinking funds on our bonded indebtedness. Assuming that our net valuation will be $92,000,000, this charge means $3.73 per 1000 on the tax rate. During the ensuing six years, that is, by the end of 1905, there will

have been paid off $1,266,000 of our bonded indebtedness. But the improvements already under way will necessitate the issuance of bonds exceeding the amount of this reduction.

The construction of the approach to and the new Cambridge Bridge, which should be completed before that time, will require the issuance of city bonds to an amount of at least $1,000,000.

The improved sewage system for surface water will require probably a further issue of bonds to the amount of $350,000, and the completion of the work already begun upon the river bank will necessitate an additional increase of our bonded indebtedness.

Our growing population will require the construction of new school buildings, and perhaps an additional fire-engine house and police station. With these things in view, it seems to me that only the sternest necessity can justify increasing our bonded indebtedness.

NEW CAMBRIDGE BRIDGE.

Work on the causeway of the old West Boston Bridge was commenced July 15, 1792, and on the wooden bridge, April 6, 1793, and the bridge was opened for travel November 23 of the same year.

Upon the nineteenth day of October, 1899, this old West Boston Bridge was closed to travel, and the new temporary structure opened.

During the year which has passed, upon the petition of the Cambridge Bridge Commission, the Massachusetts Legislature amended a previous act and authorized the construction of a drawless bridge, provided the assent of the United States Government could be obtained therefor. Application was made through the regular channels to the War Department, but the request was denied for the assigned reason that the War Department had no authority to authorize any obstruction to navigation. A majority of the members of the delegation from Massachusetts to Congress was taken up the river, and the great park development by the Cambridge Park Commission upon one bank, and by the Boston and the Metropolitan Park Commissions upon the other bank exhibited, and they unanimously voted to favor, and, if possible, to secure legislation favorable to the drawless feature of the bridge.

The Bridge Commission petitioned Congress for permission to omit the draw in the new bridge, and the petition with the proposed bill accompanying the same has been introduced by Hon. Samuel W. McCall, representative from this district.

We have assurance that both senators and all the members of the House of Representatives will favor this project, and we hope for early and favorable legislation.

The drawless feature of this bridge, on account of the saving in construction, the economy in maintenance, and the absence of interruption to traffic has been previously amplified. Investigation during the year has revealed that in some of the great cities of the world an enormous traffic passes beneath drawless bridges. But few mercantile concerns to-day are located above this bridge, and it will be but a few years before they will have disappeared from their present locations, and this beautiful section of the river, from the new bridge to Waltham, will become what nature designed it to be—one of the most attractive river parks in the world. And while the act of the legislature makes mandatory the construction of this bridge of stone and iron or steel, the Commission has felt that the structure should be designed, not only with reference to durability, but also in keeping with the river park environments of which it is to be the eastern boundary.

STREETS.

The division of the City during the past year into twenty-five districts for the purpose of street cleaning and its attendant results have met with general approval and ought not to be abandoned, but if possible extended. Their physical condition compares at least favorably with that of the streets of neighboring cities and towns.

The inferior and irregular quality of the field stone furnished at the crushers makes desirable the ownership by the city of a first-class ledge. It is impossible to properly macadamize a street with poor stone, and it is equally impossible to obtain good stone under present conditions, except at a price which is prohibitive of extensive work, and I recommend that steps be taken at once to procure a ledge of suitable stone.

Frequent openings in the streets after they are once built seems unavoidable, and these breaks in the surface appear to be incapable of complete restoration. I believe, however, that the number of openings can be made less and the repairs made more satisfactory if an ordinance be adopted charging a suitable fee to the person or corporation applying for permission to make the opening, and by appointing an Inspector whose principal or sole duty shall be to superintend the repairs at such points; the fees charged would be sufficient to pay the salary of such Inspector.

I would also recommend the adoption of a more stringent ordinance, forbidding the owners and occupants of land to allow the escape upon the highways of paper and other light material. Through carelessness or indifference, after a street has been thoroughly cleaned, not infrequently it has been found littered by such material.

I would recommend a further ordinance prohibiting the mixing of paper and other light material with ashes placed upon the sidewalk for collection by the City carts. Such papers are frequently blown about the streets, and even when retained in the receptacles in which they are placed make the collection of ashes unnecessarily expensive. If placed by our citizens in separate receptacles for collection at stated periods such light refuse could be collected in wagons especially designed for bulky but light loads, and be disposed of in some other way than by a deposit on the grounds which are being filled, to be blown about over the city.

Unexpended from the amount received last year from the Street Railway Company is the sum of substantially $11,000. In December we received from the same source about $47,500, and it is expected that by March of the present year the further sum of about $20,000 will be received, making in all about $78,500, available for improvements in our thoroughfares, which, according to the statute, must be spent upon our streets, and ought before the close of the year to contribute much to the improved condition of our highways.

FIRE DEPARTMENT.

While the efficiency of this department has been increased by the installation of eight new fire alarm boxes, by the substitution of eighteen keyless doors upon old boxes for the old-fashioned lock door, and especially by the addition of seven permanent men assigned to the engines, there yet remains, in my opinion, something to be done in the improvement of the organization.

In addition to the Chief there is today but one District Call Chief. Our City has become so large and so thickly populated that it should be divided into three districts for the purpose of control at fires, and, as our hook and ladder houses are favorably located, and as the Captains of three trucks are competent for the positions, I recommend that each of them be made a permanent District Chief, to exercise, however, the functions of such office only at fires, and I further recommend the appointment of a permanent Assistant Chief, dispensing entirely with the services of Call Chiefs.

It has been found that the precise location of fire boxes to a considerable extent was unknown by the residents of the district in which the box was located. For the purpose of emphasizing their locations the boxes and the poles upon which they are situated, for a short distance above and below the box, have been painted red, and their existence thus easily ascertained by day. Globes with red circles have been placed upon sixty-five arc lamps in the immediate vicinity of the boxes to indicate their location by night. This is somewhat of an experiment. The red band to some extent kills the power of the light, and the red glow has been found objectionable by some residents in the neighborhood; but it is believed that the utility of impressing upon the minds of the citizens where the fire alarm box may be found is greater than the slight inconvenience caused by the red globe. If, however, it shall be found advisable later to discontinue the colored globe the plain ones easily can be restored, and with but little expense.

During the year an ordinance has been adopted in accordance with a vote of the citizens of Cambridge, providing for compensation to firemen who, in the performance of duty are incapacitated for further fire service, the maximum compensation being established at $43 per month. This, I believe, was intended to be a graduated compensation, and the aid rendered under it should be commensurate with the loss of earning capacity resulting from the injury. If a fireman becomes incapacitated for fire duty through the loss of three fingers, it would seem inequitable to accord him the same compensation as a fireman who loses both legs, and yet in either of the supposed cases the man is incapacitated for fire service. In one case, however, the earning capacity is only impaired, while in the other it is lost; and hereafter in awarding pensions the capacity to longer earn a livelihood should be an element in the computation of the amount to be awarded.

SCHOOLS AND SCHOOLHOUSES.

During the year three schoolhouses, begun under previous administrations, viz.: the Roberts, Ellis and Latin, have been completed.

The Latin Schoolhouse is one of the most beautiful in the City, and one of which the City may well be proud, and is an architectural contribution to the group of City buildings of which it forms a magnificent part.

The addition to the Peabody School also was completed during the present year.

Upon the first day of December last the number of pupils in the schools was 14,100, being an increase of 314 over the preceding year. The floor space occupied for school purposes slightly exceeds thirteen and one-half acres.

At a large expense the plumbing in the older school buildings has been tested thoroughly and renovated.

The Washington School, upon Brattle Street, having been condemned a long time ago by the State authorities should be abandoned at the earliest opportunity, and as soon as another school can be constructed to accommodate the pupils now attending the Washington.

I recommend that a suitable site be at once obtained, and plans made forthwith for the erection of this much-needed schoolhouse.

During the year the Manual Training School has received the new designation of the "Rindge Manual Training School," the title to the land, building and equipment having been transferred to the City from Mr. Frederick H. Rindge, who has by this munificent gift made another generous contribution to the City, which is already indebted to him for so many substantial and lasting expressions of his liberality.

HEALTH DEPARTMENT.

The prevalence of diphtheria during the late summer and fall was so extensive as to cause fears of an epidemic. From August 1 to December 16 there were nearly three times as many cases as in the corresponding periods in 1896 and 1897, and about five times as many cases as in the corresponding months in the year 1898. The Cambridge Hospital became overcrowded, and the necessity for additional accommodations became imperative. In accordance with the statute covering such cases, the Board of Health sent a formal notice to the Mayor, which, in pursuance of the terms of the statute, he sent to the City Council, and thereafter the Board of Health, under statutory powers, seized for the purpose of an Emergency Hospital a building upon Reservoir Street, which has been equipped and is now used for the care of patients. Whether this use will be permanent or temporary remains to be decided. It is hoped by the first of March that this malady will have been reduced, if not terminated.

It is worthy of notice that the percentage of fatality in the diphtheria cases in the hospital has been a fraction less than 4, while the mortality of patients afflicted with diphtheria and treated at their homes was $11\frac{5}{29}$ per cent.

POLICE DEPARTMENT.

The force has been augmented by the addition of five reserve officers, and its service improved by twelve additional police signal boxes.

Owing to death, the number of sergeants has been established at six instead of seven as heretofore.

OVERSEERS OF THE POOR.

The almshouse has been substantially renovated during the year. New floors and plastering in the women's dining-room have contributed to its appearance, new plumbing in the part devoted to women has improved the sanitary conditions, and, better than all, the year has closed with the smallest census in recent years, owing to the increased demand for labor, and consequently the lessened demand for the care of unfortunates by the city.

ADDITIONAL RECOMMENDATIONS.

I would especially call your attention to the recommendations of the Sealer of Weights and Measures and of the Inspector of Milk and Vinegar, in relation to the proposed increase of fees to be paid for licenses to sell junk and milk.

The prosecution of some of the important criminal cases in the Third District Court should be aided by the experience and assistance of counsel; not all the cases presented to that court require such assistance, but there are so many in which it would be desirable to have counsel engaged that it is not to be expected that the City Solicitor can attend to them all. It seems to be undesirable to employ an Assistant City Solicitor; such employment would mean an increased expense in this department within a short time, and I would therefore recommend that the Mayor be authorized to employ assistance in such cases.

In my opinion the number of licensed common victuallers is excessive, and, without intending to characterize all of the places

transacting in a proper manner the business of common victuallers, there are, nevertheless, many where the license is simply used as a cloak to cover Sunday sales. Before granting such licenses the premises should be carefully inspected, the extent of business to be done considered, and the granting of such license approached with the feeling that the number should be restricted rather than enlarged.

Buildings should not be moved through the public thoroughfares unless such removal is justified by extraordinary circumstances. The public ways are not designed for this use; and such blocking of a public road not only incommodes travellers and abuttors upon the street, but impairing the effectiveness of fire service, and involving the cutting of telephone, telegraph, electric light and other wires, is out of place and an anachronism in a city. The Park Department has recently adopted an order that it will not entertain a petition for the removal of a building which necessitates the cutting of trees. I think we should go further and announce as the settled policy of the City that such permits will not be granted except under peculiar and unusual circumstances. Unless some such public notice be given, people in good faith will invest their money in buildings sold to be removed, and an unnecessary hardship thus inflicted upon a purchaser who may assume that buildings can be moved as heretofore through the public streets.

A year's experience as the executive head of the City has afforded an acquaintance with the conduct and method of the heads of all the departments, and it is but a just tribute to their uniform courtesy, efficiency and faithfulness, to state that the City is fortunate in securing such services. Their civility and competency have not only impressed me, but have also evoked favorable comment from visitors to our City.

I have endeavored to refrain from wearying you by reciting details of administration in the various departments, which will be found in the replete and commendable reports submitted by the executive boards and by the heads of departments, a careful perusal of which is earnestly urged.

While the City Charter puts the executive functions entirely in the hands of one department, it distributes the responsibilities of most legislation among three distinct and separate branches, viz., the Board of Aldermen, the Common Council and the Mayor.

Each of the first two branches being composed of more than one individual expresses its final conclusion by the action of a majority; but this does not diminish the right nor abate the duty of anyone to vote as his judgment and conscience shall command, although such adherence to conviction should place him with a minority. The other branch may or may not concur, and, even if concurrence follow, individual members of such concurring branch may vote against the action of the majority without any suggestion of strained relations. When the proposed legislation reaches the Executive, he also has the duty and responsibility of voting upon the proposition; but, inasmuch as his vote is final in his own department, and if adverse to the proposed measure must take the form of a veto, unless this purpose of our charter to secure the independent judgment of three distinct bodies upon proposed legislation be understood and remembered, there will be a tendency to assume that a divergence of views between the City Council and the Executive means a disturbance in the united relations which ought to exist, and to forget that the approval or veto of the Mayor is nothing more and nothing less than a vote by the Executive Branch upon the proposition under consideration. If the Executive signify his approval of the measure by signing it, it is in effect a vote to concur; if, however, the Executive veto the measure, it is but a vote not to concur, a vote, indeed, not as effective as non-concurrence by either of the other branches, because the measure still may be adopted, notwithstanding the veto.

It has always seemed to me that a Mayor who surrenders his judgment or abdicates his prerogative to veto, simply because he prefers to be with the majority, is recreant to the sworn trust which he assumes on such an occasion as the present.

While the powers to be exercised by the City Council and by the Mayor are radically distinct, nevertheless there should be a full and cordial discussion of proposed measures before their initiation.

Characterized by an earnest desire, not only to entertain high ideals, but also to attain the best results, we now unite in the hope, — yes, in the faith, — that this year's administration will not only be of benefit to the City which we serve, but also of credit to those who participate in its service.

ANNUAL REPORTS

ANNUAL REPORT OF THE CITY AUDITOR

City Auditor's Office,
Cambridge, December 1, 1899.

To the Honorable, the City Council: —

The undersigned herewith presents the annual statement of the receipts and expenditures of the City of Cambridge for the fiscal year beginning on the first day of December, 1898, and ending on the thirtieth day of November, 1899, together with a schedule of the City property.

Respectfully submitted,

HARRY T. UPHAM,
City Auditor.

REPORT OF THE CITY AUDITOR

Balance in the Treasury, November 30, 1898			$206,150 28
The receipts from all sources from December 1, 1898, to November 30, 1899, were as follows: —			
From City Departments		* $196,230 96	
Water Works		321,517 52	
Taxes: —			
City	$1,575,761 28		
Corporations	98,405 61		
National Banks	15,931 68		
Street Railway	47,569 33		
		1,737,667 90	
Sale of Bonds: —			
For Cambridge Bridge	$50,000 00		
Clay Lands	17,000 00		
Construction of Streets	5,000 00		
Extension of Water Works	23,000 00		
Improved Sewerage	42,000 00		
Parks	100,000 00		
Remodelling and Furnishing School Houses	77,000 00		
School Houses	55,000 00		
Premium on Loans	23,625 00		
		392,625 00	
Betterments: —			
City	$1,559 80		
Liens	3,892 35		
		5,452 15	
Perpetual Care of Lots in Cambridge Cemetery		3,136 00	
Sale of Quincy School House and Land		25,000 00	
Commissioners of Sinking Funds for payment of Street Widening Loan Bonds		8,000 00	
Temporary Loans in anticipation of Taxes		550,000 00	
Total Receipts			$3,239,629 53
The payments have been as follows: —			
The City Departments		$2,092,506 77	
Water Works		367,048 88	
Cemetery Fund, Trustees of		3,136 00	
Amounts carried forward		$2,462,691 65	$3,445,779 81

* This amount includes $50,965.53 received from the Commonwealth of Massachusetts as a Street Railway Tax and credited to the Street Department.

Amounts brought forward		$2,462,691 65	$3,445,779 81
Loans: —			
Street Widening	$8,000.00		
Temporary	550,000 00		
		558,000 00	
Taxes: —			
Abatements	$35,317 61		
County	87,085 65		
Metropolitan Sewer	74,763 08		
National Bank	7,681 26		
State	48,195 00		
		253,042 60	
			3,273,734 25
Balance unexpended			$172,045 56

This amount is subject to draft as follows: —

Cambridge Bridge	$4,782 86	
Construction of Green Street	5,000 00	
Clay Lands	9,093 16	
Land Damages	554 10	
Latin School "Furnishings"	1,840 04	
Land for School House	13,000 00	
Parks	27,581 70	
Premium on Bonds	2,835 00	
Rebuilding Harvard School House	23,234 52	
Rebuilding Streets	58,664 03	
Sale of Quincy School House and Land	25,000 00	
		171,585 41
Leaving a net balance of		$460 15

CITY FUNDED DEBT.

There have been additions to the City Funded Debt during the year as follows: —

Cambridge Bridge Loan, registered bonds payable in forty years, at an annual interest of three and one-half per cent.

For the purpose of the construction of the "Cambridge Bridge" and its approaches, and for other purposes, as authorized under the provisions of Chapter 467 of the Legislative Acts of 1898 . . . . . $50,000 00

City Loan, registered bonds payable in ten years, at an annual interest of three and one-half per cent.

For the purpose of defraying the expense of remodelling the Otis School House	8,000 00
Heating and ventilating the Morse and Putnam schoolhouses	32,000 00
Furnishing the Latin, Ellis, Peabody and Roberts School Houses	37,000 00
Amount carried forward	$127,000 00

Amount brought forward	$127,000 00
Clay Land Loan, registered bonds payable in fifteen years, at an annual interest of three and one-half per cent.	
For the purpose of defraying the expense incident to the restricting of the land of the Bay State Brick Company, as per agreement of said Company with the City of Cambridge, dated April 16, 1896, in the laying out, accepting and establishing of certain streets, and the building, construction and establishment of main drains or common sewers, within the tract of land so to be restricted and in accordance with the authority conferred by Chapter 175 of the Legislative Acts of the year 1896 . .	17,000 00
Park Loans, registered bonds payable in forty years, at an annual interest of three and one-half per cent.	
For the purpose of paying for land taken for our system of public parks and for the construction, adornment, renewal and enlargement of said parks under authority conferred by Chapter 89 of the Legislative Acts of the year 1894	100,000 00
School House Loans, registered bonds payable in twenty years, with interest at three and one-half per cent. per annum.	
For the purpose of defraying the cost of construction of the Harvard School House on Inman Street	42,000 00
Also registered bonds, payable in twenty years, for the purpose of defraying the cost of purchasing land adjoining the Manual Training School	13,000 00
Sewer Loan, registered bonds payable in thirty years, at an annual interest of three and one-half per cent.	
For the purose of constructing Sewers, as authorized by Chapter 189 and 473 of the Acts of 1899	42,000 00
Street Loan, registered bonds payable in twenty years, at an annual interest of three and one-half per cent.	
For the purpose of defraying the cost of constructing Green Street between Blanche and Sidney Streets	5,000 00
	$346,000 00
There has been a decrease in the City Debt by the payment of matured bonds as follows: —	
Street Widening Loan, coupon bonds issued November 1, 1889, at an annual interest of four per cent.	8,000 00
Total	$338,000 00

	1898.	1899.	Increase.
Funded City Debt	$4,012,400 00	$4,350,400 00	$338,000 00
Sinking Funds.....	780,361 71	930,733 90	150,372 19
Net Funded City Debt.....	$3,232,038 29	$3,419,666 10	$187,627 81

The following is a statement of the total funded debt of the city, with the rates of interest thereon :—

BRIDGE LOAN.

Date of issue.	Rate of Interest.	When due.	Amount.	Total.
Oct. 1, 1887.....	4 per cent—30 yrs.....	Oct. 1, 1917..	$10,000 00	
July 1, 1888.....	4 " —30 "	July 1, 1918..	100,000 00	
Sept. 1, 1888.....	4 " —30 "	Sept. 1, 1918.....	100,000 00	
Mar. 1, 1889.....	4 " —30 "	Mar. 1, 1919.....	115,000 00	
Nov. 1, 1890.....	4 " —30 "	Nov. 1, 1920.....	5,000 00	
July 1, 1891.....	4 " —30 "	July 1, 1921.	60,000 00	
July 1, 1891.....	4 " —10 "	July 1, 1901.....	15,000 00	
Aug. 1, 1893.....	4 " —30 "	Aug. 1, 1923.....	10,000 00	
July 1, 1899.....	3½ " —40 "	July 1, 1939.....	50,000 00	$465,000 00

BUILDING LOAN.

May 2, 1892.....	4 per cent—10 yrs.....	May 2, 1902.....	$20,000 00	
Nov. 1, 1893.....	4 " —10 "	Nov. 1, 1903.....	40,000 00	
Aug. 1, 1894.....	4 " —20 "	Aug. 1, 1914.....	118,000 00	
Oct. 1, 1895.....	4 " —20 "	Oct. 1, 1915.....	60,000 00	
Oct. 1, 1896	4 " —20 "	Oct. 1, 1916.....	103,000 00	$341,000 00

CAMBRIDGE CEMETERY LOAN.

Aug. 1, 1895.....	4 per cent—20 yrs.....	Aug. 1, 1905.....		$65,000 00

CITY LOAN.

Aug. 1, 1894.....	4 per cent—10 yrs.....	Aug. 1, 1904.....	$52,000 00	
Aug. 1, 1898.....	3½ " —10 "	Aug. 1, 1908.....	4,900 00	
July 1, 1899.....	3½ " —10 "	July 1, 1909.....	45,000 00	
Nov. 1, 1899.....	3½ " —10 "	Nov. 1, 1909.....	32,000 00	$133,900 00

CLAY LAND LOAN.

July 1, 1896.....	4 per cent—15 yrs.....	July 1, 1911.....	$50,000 00	
Nov. 1, 1897.....	3½ " —15 "	Nov. 1, 1912.....	20,000 00	
Aug. 1, 1898.....	3½ " —15 "	Aug. 1, 1913.....	10,000 00	
July 1, 1899.....	3½ " —15 "	July 1, 1914.	17,000 00	$97,000 00

PARK LOAN.

Feb. 1, 1894.....	4 per cent—30 yrs.....	Feb. 1, 1924.....	$360,000 00	
Aug. 1, 1895	4 " —40 "	Aug. 1, 1935.....	100,000 00	
Feb. 1, 1896.....	4 " —40 "	Feb. 1, 1936.. ...	100,000 00	
Aug. 1, 1896.....	4 " —30 "	Aug. 1, 1926.....	100,000 00	
Oct. 1, 1896.....	4 " —30 "	Oct. 1, 1926.....	40,000 00	
Sept. 1, 1897.....	3½ " —40 "	Sept. 1, 1937.....	100,000 00	
Nov. 1, 1897.....	3½ " —40 "	Nov. 1, 1937.....	50,000 00	
June 1, 1898.....	3½ " —40 "	June 1, 1938.....	50,000 00	
Aug. 1, 1898.... ...	3½ " —40 "	Aug. 1, 1938.....	100,000 00	
Aug. 1, 1899	3½ " —40 "	Aug. 1, 1939.....	100,000 00	$1,100,000 00

PAVING LOAN.

Nov. 1, 1892	4 per cent—10 yrs.....	Nov. 1, 1902.....	$50,000 00	
Oct. 1, 1897.....	3½ " —10 "	Oct. 1, 1907.....	20,000 00	$70,000 00

Amount carried forward $2,271,900 00

Amount brought forward $2,271,900 00

SCHOOL-HOUSE LOAN.

Date of Issue.	Rate of Interest.	When due.	Amount.	Total.
May 1, 1890.....	4 per cent—10 yrs.....	May 1, 1900.....	$100,000 00	
Jan. 1, 1891.....	4 " —10 "	Jan. 1, 1901.....	100,000 00	
July 1, 1891.....	4 " —10 "	July 1, 1901.....	60,000 00	
Nov. 1, 1892.....	4 " —10 "	Nov. 1, 1902.....	20,000 00	
Oct. 1, 1896.....	4 " —20 "	Oct. 1, 1916.....	6,000 00	
July 1, 1897.....	3½ " —20 "	July 1, 1917.....	100,000 00	
Nov. 1, 1897.....	3½ " —10 "	Nov. 1, 1907.....	9,500 00	
May 2, 1898..	3½ " —20 "	May 2, 1918.....	100,000 00	
June 1, 1898.....	3½ " —20 "	June 1, 1918.....	50,000 00	
Aug. 1, 1898.....	3½ " —20 "	Aug. 1, 1918.....	142,000 00	
July 1, 1899.....	3½ " —20 "	July 1, 1919.	42,000 00	
Nov. 1, 1899.....	3½ " —20 "	Nov. 1, 1919.....	13,000 00	$742,500 00

SEWER LOAN.

July 1, 1873	6 per cent—30 yrs.....	July 1, 1903.....	$136,000 00	
July 1, 1874.....	6 " —30 "	July 1, 1904.....	295,000 00	
July 1, 1875.....	6 " —30 "	July 1, 1905.....	144,000 00	
Nov. 1, 1887.....	4 " —20 "	Nov. 1, 1907.....	30,000 00	
Nov. 1, 1889...	4 " —20 "	Nov. 1, 1909.....	22,000 00	
May 1, 1890.....	4 " —20 "	May 1, 1910.....	15,000 00	
July 1, 1891	4 " —20 "	July 1, 1911.....	15,000 00	
Aug. 1, 1894.....	4 " —30 "	Aug. 1, 1924.....	75,000 00	
Oct. 1, 1895.....	4 " —30 "	Oct. 1, 1925.....	60,000 00	
Oct. 1, 1896...	4 " —20 "	Oct. 1, 1916.....	75,000 00	
Nov. 1, 1899.....	3½ " —30 "	Nov. 1, 1929.....	42,000 00	$909,000 00

STREET LOAN.

May 2, 1892.....	4 per cent—10 yrs.....	May 2, 1902.....	$55,000 00	
Aug. 1, 1894.....	4 " —20 "	Aug. 1, 1914.....	30,000 00	
Oct. 1, 1895.....	4 " —20 "	Oct. 1, 1915.....	60,000 00	
Oct. 1, 1896.....	4 " —20 "	Oct. 1, 1916.....	137,000 00	
Nov. 1, 1897.....	3½ " —10 "	Nov. 1, 1907.....	11,000 00	
May 2. 1898.....	3½ " —20 "	May 2, 1918.....	15,000 00	
Nov. 1, 1899.....	3½ " —20 "	Nov. 1, 1919.....	5,000 00	$313,000 00

STREET WIDENING LOAN.

July 1, 1873.....	6 per cent—30 yrs.....	July 1, 1903.....	$10,000 00	
July 1, 1874.....	6 " —30 "	July 1, 1904.....	90,000 00	
July 1, 1875.....	6 " —30 "	July 1, 1905.....	14,000 00	$114,000 00

TOTAL FUNDED CITY DEBT $4,350,400 00

THE FUNDED WATER DEBT.

There has been an addition to the Water Debt during the year by the issue of registered 3½ per cent bonds as follows: —

Nov. 1, 1899, due Nov. 1, 1919 . . . . . $23,000 00

	1898.	1899.	Increase.	Decrease.
Funded Water Debt.....	$3,249,100 00	$3,272,100 00	$23,000 00	.....
Sinking Fund of Water Works	545,396 78	665,583 82	.....	$120,187 04
Net Funded Water Debt.....	$2,703,703 22	$2,606,516 18	.....	$97,187 04

Following is a statement of the total Funded Water Debt of the city, with rates of interest thereon: —

Date of Issue.	Rate of Interest.	When Due.	Amount.	Total.
Nov. 1, 1886.....	3½ per cent — 20 years..	Nov. 1, 1906.....	$43,000 00	
Oct. 1, 1887	4 " — 20 " ..	Oct. 1, 1907.....	90,000 00	
Nov. 1, 1887.....	4 " — 20 " ..	Nov. 1, 1907.....	22,000 00	
July 1, 1888.....	4 " — 20 " ..	July 1, 1908.....	46,000 00	
Aug. 1, 1888.....	4 " — 20 " ..	Aug. 1, 1908.....	25,000 00	
July 1, 1889.....	4 " — 20 " ..	July 1, 1909.....	20,000 00	
May 1, 1885.....	4 " — 25 " ..	May 1, 1910.....	286,000 00	
July 1, 1890.....	1 " — 20 " ..	July 1, 1910.....	75,000 00	
Sept. 1, 1890.....	4 " — 20 " ..	Sept. 1, 1910.....	125,000 00	
Jan. 1, 1891.....	4 " — 20 " ..	Jan. 1, 1911.....	20,000 00	
Oct. 1, 1891.....	4 " — 20 " ..	Oct. 1, 1911.....	35,000 00	
Jan. 1, 1892.....	4 " — 20 " ..	Jan. 1, 1912.....	150,000 00	
May 2, 1892.....	4 " — 20 " ..	May 2, 1912.....	75,000 00	
Nov. 1, 1892.....	4 " — 20 " ..	Nov. 1, 1912.	45,000 00	
Feb. 1, 1893	4 " — 20 " ..	Feb. 1, 1913.....	100,000 00	
Aug. 1, 1893.....	4 " — 20 " ..	Aug. 1, 1913.....	50,000 00	
April 1, 1895.....	4 " — 20 " ..	April 1, 1915.....	200,000 00	
Aug. 1, 1895.....	4 " — 20 " ..	Aug. 1, 1915	200,000 00	
April 1, 1894.....	4 " — 30 " ..	April 1, 1924.....	300,000 00	
April 1, 1896.....	4 " — 20 " ..	April 1, 1916.....	100,000 00	
July 1, 1896.....	4 " — 20 " ..	July 1, 1916.....	200,000 00	
Aug. 1, 1896.....	4 " — 20 " .	Aug. 1, 1916.....	100,000 00	
Oct. 1, 1896.....	4 " — 20 " ..	Oct. 1, 1916.....	265,100 00	
April 1, 1897.....	3½ " — 20 " .	April 1, 1917	200,000 00	
July 1, 1897.....	3½ " — 20 " ..	July 1, 1917.....	100,000 00	
Nov. 1, 1897.....	3½ " — 20 " ..	Nov. 1, 1917.....	75,000 00	
Dec. 1, 1897.....	3½ " — 20 " ..	Dec. 1, 1917.....	140,000 00	
May 2, 1898.....	3½ " — 20 " ..	May 2, 1918.....	50,000 00	
June 1, 1898.....	3½ " — 20 " ..	June 1, 1918.....	60,000 00	
Nov. 1, 1898.....	3½ " — 20 " ..	Nov. 1, 1918.....	50,000 00	
Nov. 1, 1899.....	3½ " — 20 " ..	Nov. 1, 1919.....	23,000 00	$3,272,100 00

RECAPITULATION.

Amount of funded City Loan upon which interest is at 6 per cent	$689,000 00	
Amount of funded City Loan upon which interest is at 4 per cent	2,533,000 00	
Amount of funded City Loan upon which interest is at 3½ per cent	1,128,400 00	
		$4,350,400 00
Amount of Water Loan upon which interest is at 4 per cent	$2,531,100 00	
Amount of Water Loan upon which interest is at 3½ per cent	741,000 00	
		$3,272,100 00

Temporary loans for the past twelve years, and interest paid upon the same: —

Year.	Temporary Loan.	Interest paid upon Loan.	Year.	Temporary Loan.	Interest paid upon Loan.
1888.....	$400,000	$9,497 36	1894.....	$125,000.	$3,106 15
1889.....	490,000	5,919 54	1895.....	550,000	6,194 64
1890.....	425,000	7,570 57	1896.....	786,000	12,344 07
1891.....	465,000	10,796 25	1897.....	600,000	6,186 40
1892.....	516,000	8,015 51	1898.....	500,000	9,642 86
1893.....	541,850	11,560 32	1899.....	550,000	6,968 86

THE TRUST FUNDS.

Assumed by the City are held by trustees, and interest is paid upon them at the rate of 6 per cent annually, as follows: —

Name of Fund.	Amount.	Interest.
Daniel White Charity Fund	$5,000	At 6 per cent. $300
Dowse Institute Fund	10,000	At 6 per cent. 600
Sanders Temperance Fund	10,000	At 6 per cent. 600
	$25,000	$1,500

CEMETERY FUND.

Amount of Fund Nov. 30, 1898			$43,273 78
RECEIVED.			
For perpetual care of lots in Cambridge Cemetery	$3,136 00		
Interest on investments	1,661 24		
		$4,797 24	
EXPENDED.			
For care of lots in Cambridge Cemetery		1,656 72	
			3,140 52
Amount of Fund, Nov. 30, 1899			$46,414 30
The Fund is held in trust and is invested as follows: —			
City of Cambridge Bonds		$44,400 00	
Cambridgeport Savings Bank		2,014 30	
			$46,414 30

SINKING FUND "HARVARD BRIDGE."

Amount of Fund Nov. 30, 1898	$89,563 87
Interest accumulations (1899)	3,162 17
Appropriation for 1899	8,000 00
	$100 726 04

SINKING FUND "PARK."

Amount of Fund Nov. 30, 1899	$44,354 52
Interest accumulations (1899)	1,566 00
Appropriation for 1899	16,250 00
	$62,170 52

SINKING FUND "CLAY LAND."

Amount of Fund Nov. 30, 1899	$6,087 50
Interest accumulations (1899)	214 93
Appropriation for 1899	4,000 00
	$10,302 43

SINKING FUND "GENERAL."

Amount of Fund Nov. 30, 1899		$640,355 82
Interest accumulations (1899)	$18,429 09	
Less street widening bonds paid	8,000 00	
		10,429 09
Appropriation for 1899		106,750 00
		$757,534 91

COMMISSIONERS OF SINKING FUNDS.

Amount of funds November 30, 1898		$780,361 71
Harvard Bridge	$89,563 87	
Park	44,354 52	
Clay Land	6,087 50	
General	640,355 82	
	$780,361 71	

RECEIVED.

From City Treasurer, appropriation for 1899	$135,000 00	
Harvard Bridge	$8,000 00	
Park	16,250 00	
Clay Land	4,000 00	
General	106,750 00	
	$135,000 00	
Interest accumulations	23,372 19	
		158,372 19
		$938,733 90

EXPENDED.

For matured Street Widening Bonds	8,000 00
Amount of Fund, November 30, 1899	$930,733 90

TRUSTEES OF SINKING FUND OF WATER WORKS.

Amount of Fund, November 30, 1898		$545,396 78
From City Treasurer, for amount due and appropriated by the City Council from the Revenue of the Water Works	$113,718 50	
Interest accumulations	6,468 54	
		120,187 04
Amount of fund, November 30, 1899		$665,583 82

ABATEMENT — TAXES.

No appropriation is made for abatements, as the Assessors are expected to allow in the overlay an amount sufficient to cover the same.

The total amount of tax abatements allowed was	$35,317 61
The overlay for 1899 was	31,356 13
Deficit	$3,961 48

The abatements allowed by the City Collector on certificates of the Assessors were as follows: —

	Real.	Personal.	Polls.	Total.
Tax of 1893	.....	$6 56	.....	$6 56
" " 1895	.....	10 20	$4 00	14 20
" " 1896	$7,793 11	16 61	12 00	7,821 72
" " 1897	1,900 25	215 88	16 00	2,132 13
" " 1898	2,190 16	7,289 37	42 00	9,521 53
" " 1899	7,103 08	8,543 47	126 00	15,772 55
Street Watering	.....	.....	.....	48 92
	$18,986 60	$16,082 09	$200 00	$35,317 61

TAXES.

The amount of taxes assessed by the Board of Assessors on the real and personal estates and polls of Cambridge, for the year 1899, was as follows: —

Valuation of real estate		$74,550,800 00
Valuation of personal estate		16,991,995 00
		$91,542,795 00
Assessed at $17.10 per $1,000 gives		$1,565,381 79
24,995 polls at $2		49,990 00
Bank stock (non-residents separately assessed)		7,067 52
		$1,622,439 31
This tax is divided as follow: —		
For city purposes *		$1,373,971 93
County assessments		87,085 65
Overlay		31,356 13
State assessments		122,958 08
State charge for non-resident bank stock		7,067 52
		$1,622,439 31
Increase in number of polls since last year: —		
367 polls at $2.00		$734 00
Increase in real estate valuation		1,642,700 00
Increase in personal valuation		349,005 00
Gain in valuation since last year		$1,992,439 00
Number of houses in 1899		13,588
Number of houses in 1898		13,473½
Number of houses built during the past year		114½
Number of horses assessed		4,894
Number of cows assessed		231
Number of swine assessed		18

*To meet the city expenses the income from various departments is added to this sum raised by taxation.

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1897.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One	4,119	$8,238 00	$6,640,380	$19,498,700	$26,139,080	2,599	$465,671 90
Two	7,244	14,488 00	3,394,345	15,849,000	19,243,345	3,477	351,246 53
Three	3,742	7,484 00	1,953,520	9,389,700	11,343,220	1,604	205,990 35
Four	5,894	11,788 00	2,458,700	14,585,200	17,043,900	3,280	310,056 25
Five	3,408	6,816 00	1,855,600	11,016,600	12,872,200	2,257	232,079 50
Totals	24,407	$48,814 00	$16,302,545	$70,339,200	$86,641,745	13,217	$1,565,044 53

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1898.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One	4,145	$8,290 00	$6,546,050	$20,459,700	$27,005,750	2,632	$451,184 30
Two	7,307	14,614 00	3,525,795	16,259,200	19,784,995	3,572½	339,087 918
Three	3,751	7,502 00	2,027,245	9,693,500	11,720,745	1,609	199,722 218
Four	5,937	11,874 00	2,547,100	14,854,700	17,401,800	3,333	297,263 52
Five	3,488	6,976 00	1,996,800	11,641,600	13,637,800	2,327	230,635 92
Totals	24,628	$49,256 00	$16,642,990	$72,908,100	$89,551,090	13,473½	$1,517,893 876

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1899.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One	4,204	$8,408	$7,186,200	$21,064,600	$28,250,800	2,706	$491,496 68
Two	7,554	15,108	3,642,275	16,670,800	20,313,075	3,586	362,461 5825
Three	3,783	7,566	2,030,820	9,802,400	11,833,220	1,604	209,914 062
Four	5,905	11,810	2,418,700	15,156,400	17,575,100	3,313	312,344 21
Five	3,549	7,098	1,714,000	11,856,600	13,570,600	2,379	239,155 26
Totals	24,995	$49,990	$16,991,995	$74,550,800	$91,542,795	13,588	$1,615,371 7945

Statement of the valuations of the personal property and real estate of the City of Cambridge, with the number of polls, dwellings, and rate of taxation for the past ten years: —

Year.	Polls.	Personal.	Real Estate.	Total.	Dwellings.	Rate per $1,000.
1890	19,221¾	$15,339,925	$52,235,000	$67,574,925	10,615	$15 60
1891	20,731¼	16,508,770	54,167,914	70,676,684	10,932	15 50
1892	22,013¼	17,687,595	56,668,100	74,355,695	11,359	15 00.
1893	22,752	17,511,089	58,782,900	76,293,989	11,768	16 40
1894	22,172	16,658,320	60,877,300	77,535,620	12,262	15 80
1895	22,781	16,607,360	64,303,700	80,911,060	12,305	15 70
1896	23,847	15,914,995	67,835,100	83,750,095	12,723	15 10
1897	24,407	16,302,545	70,339,200	86,641,745	13,217	17 50
1898	24,628	16,642,990	72,908,100	89,551,090	13,473	16 40
1899	24,995	16,991,995	74,550,800	91,542,795	13,588	17 10

Abatements and discounts upon taxes for the past ten years, and amount of tax uncollected December 1, 1899: —

Year.	Total Tax.	Total Abatement.	Total Discounts.	Amount of Tax uncollected December 1, 1899.
1889	$1,088,374 60	$20,982 71	$28,081 09	....
1890	1,099,741 38	20,966 82	28,012 44	.....
1891	1,143,712 67	21,343 12	.....	.....
1892	1,240,186 50	21,636 54	.....	.....
1893	1,303 639 84	24,678 10	.....	$17,080 04
1894	1,278,899 72	26,926 07	.....	15,666 70
1895	1,324,613 76	19,427 40	.....	20,883 01
1896	1,321,932 65	17,922 54	.....	19,414 06
1897	1,574,047 50	22,081 73	.....	29,101 87
1898	1,527,863 88	27,566 98	.....	35 905 12
1899	1,623,592 35	35,317 61	.....	291,251 38

The valuations of estates in this city, for the years hereinbefore mentioned, are the same as originally made by the Board of Assessors, during those years, and the same figures were reported by that board to the Tax Commissioners for each of the years respectively. These valuations were subject to changes in each year, after such report was made, as shown by the following: —

Net valuations of estates in the City of Cambridge, for the past three years, after adding the amounts of all supplementary warrants and deducting therefrom all abatements: —

Year.	Total Valuation.	Abatements.	Net Valuation.
1897	$86,773,545	$1,425,272	$85,348,273
1898	89,883,090	1,828,070	88,055,020
1899	91,583,791	915,000	90,668,791
	$268,240,426	$4,168,342	$264,072,084

BORROWING CAPACITY.

The average net valuation of the City of Cambridge for the years 1897, 1898 and 1899, is $88,024,028 00

This last sum represents the amount upon which the limit of the rate of taxation, and also of municipal indebtedness is fixed under the provisions of Chapter 312 of the Acts of the year 1885.

2½ per cent. on same is			$2,200,600 70
The entire City Debt is		$4,350,400 00	
Of this amount the following loans are not within the legal debt limit, being exempted by the following Acts of the Legislature: —			
Cambridge Bridge Loan.			
Acts of 1898, Chapter 467 .	$50,000 00		
Amounts carried forward .	$50,000 00	$4,350,400 00	$2,200,600 70

Amounts brought forward . .	$50,000 00	$4,350,400 00	$2,200,600 70
Clay Land Loan.			
Acts of 1896, Chapter 175 .	97,000 00		
Harvard Bridge Loan.			
Acts of 1887, Chapter 282 Acts of 1888, Chapter 73 Acts of 1891, Chapter 311 .	400,000 00		
Park Loan.			
Acts of 1892, Chapter 341 Acts of 1893, Chapter 337 Acts of 1894, Chapter 89 Acts of 1897, Chapter 469 .	1,100,000 00		
Sewer Loan.			
Acts of 1899, Chapter 189 Acts of 1899, Chapter 473 .	42,000 00		
		1,689,000 00	
		$2,661,400 00	
The entire Sinking Fund is .	$930,733 90		
Of this amount there should be deducted on account of Exempted Loans: —			
"Harvard Bridge"	$100,726 04		
"Park" . .	62,170 52		
Clay Lands . .	10,302 43		
	173,198 99		
Net Sinking Fund		757,534 91	
Net City Debt December 1, 1899			1,903,865 09
Borrowing capacity for City purposes, December 1, 1899 . . .			$296,735 61

ACTS OF 1885, CHAPTER 312.

"AN ACT TO LIMIT MUNICIPAL DEBT OF AND THE RATE OF TAXATION IN CITIES.

"Be it enacted, etc., as follows: —

"SECTION 1. The taxes assessed on property in any city, except the City of Boston, exclusive of State Tax, County Tax and sums required by law to be raised on account of the City Debt, shall not exceed in any year twelve dollars on every one thousand dollars of the average of the assessors' valuations of the taxable property therein for the preceding three years, the valuation being first reduced by the amount of all abatements allowed thereon, previous to the thirty-first day of December in the year preceding said assessment, and any order or appropriation requiring a larger assessment than is herein limited shall be void.

"SECT 2. The limit of indebtedness of cities shall hereafter be two and one half per cent. on the average valuation prescribed in Section one of this act."

TAX LEVY.

Average net valuation for 1897, 1898 and 1899	$88,024,028 00
Assessed at $12.00 per $1,000 gives	1,056,288 00

Which is the legal limit of taxation for municipal purposes for 1898, outside of the Sinking Fund requirements, Interest on the Debt and State and County Tax, unless advantage is taken of the following Legislative Act of 1893: —

ACTS OF 1893, CHAPTER 247.

"AN ACT AUTHORIZING ASSESSORS IN CITIES OF LESS THAN ONE HUNDRED THOUSAND INHABITANTS TO USE THE VALUATION OF THE YEAR PRECEDING AS A BASIS OF TAXATION.

"Be it enacted, etc., as follows: —

"SECTION 1. In every city containing less than one hundred thousand inhabitants, the taxes assessed on property, exclusive of State Tax, County Tax and sums required by law to be raised on account of City Debt, shall not exceed in any year twelve dollars on every one thousand dollars of the assessors' valuation of the taxable property therein for the preceding year, said valuation being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment, and any order or appropriation requiring a larger assessment than is herein limited shall be void; but, the City Council of any city coming within the provisions of this Act, may, in any year, decide that the taxes assessed shall be raised in accordance with the provisions of Section one of Chapter three hundred and twelve, of the Acts of the year eighteen hundred and eighty-five."

In which case the net valuation for 1899 being	$90,668,791 00
Assessed at $12.00 per $1,000 gives	1,088,025 00

BALANCE SHEET OF THE CITY OF CAMBRIDGE, DECEMBER 1, 1899, SHOWING ASSETS AND LIABILITIES.

	Assets.	Liabilities.
Betterments	$2,836 55	.....
Cemetery Fund	46,414 30	.....
City Debt (Contingent)	.....	$200,000 00
City of Cambridge (City Property)	5,484,270 00	.....
City Treasurer (Cash)	172,045 56	.....
Daniel White Charity (Trust Fund)	.....	5,000 00
Dowse Institute Fund (Trust Fund)	.....	10,000 00
Funded City Debt	.....	4,350,400 00
Funded Water Debt	.....	3,272,100 00
Park Betterments	73,094 23	.....
Park Betterments Lien	19,534 18	.....
Sanders Temperance Fund (Trust Fund)	.....	10,000 00
Sinking Funds	930,733 90	.....
Sinking Fund of Water Works	665,583 82	.....
Taxes due the City	429,302 18	.....
Tax Liens	24,176 35	.....
Tax Sale "Surplus"	.....	491 07
	$7,847,991 07	$7,847,991 07

ESTIMATED REVENUE AND ACTUAL REVENUE FOR THE YEAR ENDING NOVEMBER 30, 1899.

	Actual.	Estimated.
Bridge Department	$4,713 43	$4,700 00
Cemetery Department	16,133 90	20,000 00
City Clerk Department	2,401 20	2,600 00
Contingent Fund	705 89	.....
Engineering Department	500 00	500 00
Fire Department	187 20	100 00
Inspection of Milk and Vinegar	151 00	150 00
Inspection of Wires	7 86	200 00
Interest	9,547 76	8,000 00
Lamp Department	42 75	.....
Law Department	1,000 00	1,000 00
Overseers of the Poor	13,623 07	20,400 00
Park Department	7,554 42	7,437 33
Plumbers' Examiners	28 50	30 00
Police Department	5,884 96	6,000 00
Public Library	4,627 70	4,800 00
Public Property	1,891 13	4,500 00
School Department	6,065 02	6,000 00
Sealer of Weights and Measures	517 29	500 00
Sewer Department	9,181 12	10,150 00
State Aid	18,663 58	16,800 00
Stationery and Printing	923 23	1,200 00
Street Department	83,513 76	81,642 93
Treasury Department	2,366 19	2,300 00
Water Works	321,517 52	322,212 50
Sale of City Lands	25,000 00	5,000 00
Taxes:		
Corporation	98,405 61	83,000 00
National Bank	8,250 42	7,000 00
Taxes of 1899	1,332,340 97	1,393,591 35
Old Taxes	243,420 31	230,000 00
	$2,225,165 79	$2,239,814 11

After the annual appropriations had been made, the following additional appropriations were made and provided for by City Loans, viz. : —

Building Streets, Clay Land District	$18,000 00
Extension of Green Street	5,000 00
Furnishing Ellis School House	3,000 00
Furnishing Latin School House	29,500 00
Furnishing Peabody School House	2,300 00
Furnishing Roberts School House	3,000 00
Heating and Ventilating Morse and Putnam School Houses	32,000 00
Improved Sewerage	100,000 00
Land for School House, Ward One	13,000 00
Parks	100,000 00
Rebuilding Harvard School House	47,000 00
Remodelling Otis School House	8,000 00
Water Works, Construction	10,000 00
	$370,800 00

Of this amount bonds to the amount of $306,000.00 were issued.

After the annual appropriations had been made, the following appropriations were made and provided for by transfers and unestimated revenue, viz : —

Cambridge Bridge		$4,000 00
Filling City Lands		225 00
Health Department		1,850 00
Law Department		332 59
Overseers of the Poor. — Outside Aid		750 00
Park Department: —		
Construction	$5,437 33	
Maintenance	998 60	
		6,435 93
Public Property: —		
City Buildings	$400 00	
New Latin School House	4,000 00	
School Houses: Care and Repairs	4,500 00	
		8,900 00
School Department: —		
Incidentals	$300 00	
Salaries	2,050 00	
Text Books and Supplies	1,000 00	
		3,350 00
Street Department: —		
Cleaning	$1,750 00	
Maintenance	2,377 40	
Paving	2,500 00	
Rebuilding Streets	49,454 05	
		56,081 45
		$81,924 97

TRANSFERS.

The following transfers were made from the appropriations mentioned, to make up deficiencies occurring in the appropriations to which transfers were made, viz :—

From the Appropriation for	Amounts.	To the Appropriation for	Amounts.
Contingent Fund	$6,607 59	Filling City Lands	$225 00
		Health Department	1,850 00
		Outside Aid	750 00
		City Buildings, "Care and Repair"	400 00
		Law Department	332 59
		School Department, Salaries	2,050 00
		School Dept., Text Book & Supplies	1,000 00
City Buildings, Care and Repair	4,500 00	School-houses, Care and Repair	4,500 00
New Latin, Furnishings	4,000 00	New Latin School-house	4,000 00
Harvard School, Heating	1,000 00	Contingent Fund	1,000 00
School Dept., Text Book & Supplies	300 00	School Department, Incidentals	300 00
Sewers, Construction	1,300 00	Contingent Fund	1,300 00
Sewers, Maintenance	1,600 00	Contingent Fund	1,600 00
Street Department, Maintenance	1,750 00	Street Department, Cleaning	1,750 00
Street Department, Rebuilding	998 60	Park Department, Maintenance	998 60
	$22,056 19		$22,056 19

COMPARATIVE STATEMENT BY DECADES FROM 1855 TO 1895.

	1855.	1865.	1875.	1885.	1895.
Population	20,637	29,112	47,838	59,660	81,643
Valuation	$15,437,100 00	$26,085,900 00	$66,623,014 00	$55,346,555 00	$80,911,060 00
City Tax	100,604 53	267,708 60	1,060,396 52	804,800 00	1,103,455 30
County Tax	10,137 78	18,280 99	37,580 73	29,381 54	73,887 84
State Tax	5,190 00	118,487 00	58,880 00	44,835 00	46,800 00
Tax rate per $1,000	7 10	15 00	17 00	15 50	15 70
Total Expenditures	173,533 58	536,911 82	2,605,267 74	2,354,298 69	3,686,702 54
City Debt	146,600 00	833,092 00	4,106,843 21	2,361,396 50	3,913,634 23
Expenditures by Departments:—					
Bridges	890 31	9,007 77	39,068 39	11,829 77	16,297 33
Cemeteries	6,553 67	16,742 29	19,438 66	80,399 22	16,999 40
Fire Department	9,623 70	21,958 74	89,949 99	59,341 15	104,898 59
Lighting Streets	2,987 32	9,062 24	20,919 04	32,269 07	69,926 61
Pauper Department	8,520 41	21,481 52	79,719 54	56,338 24	100,841 33
Police Department	4,499 56	22,833 14	71,093 35	78,357 73	110,784 22
Public Library	.....	1,111 77	6,040 04	6,643 51	21,034 83
Schools	32,169 16	81,842 47	258,985 15	227,511 77	362,353 79
Sewers	4,610 68	3,683 07	135,432 28	40,945 40	149,459 89
Streets	14,554 73	35,638 38	155,476 90	148,088 65	252,154 62
Water Works	.....	20,327 79	234,431 03	485,691 04	758,054 81

EXPENDITURES OF THE DIFFERENT DEPARTMENTS FROM 1891 TO 1899 INCLUSIVE.

NAMES OF DEPARTMENTS.	Expended in 1891.	Expended in 1892.	Expended in 1893.	Expended in 1894.	Expended in 1895.	Expended in 1896.	Expended in 1897.	Expended in 1898.	Expended in 1899.
Ambulance Department	.....	.....	.....	$625 00	$2,269 15	$2,452 39	.....	.....	.....
Assessors' Department	$9,585 82	$10,665 86	$10,922 58	10,919 65	12,797 40	12,943 24	$13,077 44	$13,552 25	$13,489 10
Auditing Department	3,118 43	3,167 32	3,445 86	3,983 67	3,352 03	3,567 88	3,511 12	3,489 04	3,470 88
Cemetery Department	18,131 22	16,791 09	19,462 59	17,998 89	16,999 40	20,000 00	19,846 77	19,832 66	19,910 23
City Clerk Department	5,656 66	5,996 68	5,978 12	6,229 55	6,404 25	7,107 04	7,193 53	7,759 82	7,875 84
City Messenger Department	2,533 83	2,518 16	2,525 96	2,587 54	2,645 92	2,763 59	2,799 51	2,859 04	2,555 94
Civil Service Department	224 80	225 00	240 50	224 50	275 00	249 97	248 07	248 85	247 05
Clerk of Committees Department	3,428 36	3,451 52	3,526 06	3,597 37	3,708 47	3,925 34	3,946 56	3,972 39	3,968 90
Contingent Fund	8,075 97	7,212 36	10,847 07	15,348 28	14,514 68	16,139 18	7,966 46	11,064 33	13,099 91
Election Expenses	7,385 56	10,557 49	12,044 88	9,692 50	9,476 60	12,463 99	9,943 08	10 861 47	9,948 85
Engineering Department	9,448 59	9,902 11	9,644 00	15,279 50	22,743 52	14,211 55	12,969 29	11,147 34	11,224 85
Executive Department	2,583 60	4,387 95	4,641 40	4,825 08	5,362 15	5,414 08	5,299 35	5,184 26	5,182 88
Fire Department	66,773 83	61,016 48	61,627 27	72,488 69	82,171 99	85,467 88	78,687 13	80,152 89	84,900 23
Health Department	4,392 39	4,887 62	5,475 37	6,097 88	11,482 98	16,999 55	17,059 35	17,496 64	19,754 04
Inspection of Milk and Vinegar	1,041 24	999 90	1,298 76	1,350 00	1,388 14	1,586 24	1,583 90	1,499 56	1,500 00
Inspection of Provisions, etc	....	.....	.....	756 06	747 89	793 60	796 19	798 12	793 60
Inspection of Wires	7,299 85	12,548 88	9,545 07	10,148 01	10,399 82	11,999 74	10,699 98	11,197 60	14,499 98
Interest	127,180 58	134,036 63	136,877 92	126,289 20	118,099 84	132,099 07	134,396 40	135,795 18	139,432 86
Lamp Department	47,989 92	63,862 68	66,615 93	68,988 81	69,926 61	67,325 31	69,264 96	69,182 20	71,980 42
Law Department	2,830 94	3,044 37	3.206 19	3,272 94	3,970 45	5,197 44	5,189 88	5,192 65	5,632 35
Overseers of the Poor Department	83,104 59	88,370 89	97,570 17	100,810 42	100,841 33	105,379 81	106,373 80	103,983 80	104.845 15
Park Department	.....	.....	339 13	258,276 09	222,475 05	256,490 43	211,783 90	217,188 89	175,065 82
Plumbers' Examiners Department	.....	.....	.....	119 95	153 81	101 05	116 40	111 50	98 75
Police Department	98,363 28	104,547 24	111,581 80	110,244 91	110,784 22	110 111 14	113,550 42	116,762 59	116,998 35
Public Library	13,426 22	13,638 57	14,585 44	29,875 62	21,064 83	18 493 00	19,823 36	20,078 38	21,224 67
Public Property	204,185 24	178,324 92	149,280 61	187,922 57	154,289 89	176,264 31	222,216 56	258,628 93	332,503 41
School Department	213,934 48	224,670 38	238,018 21	248,265 10	258,766 08	272,481 50	282,400 45	295,673 51	335,372 89
Sealer of Weights and Measures	1,560 44	1,684 10	1,654 93	1,598 95	1,491 29	1,570 52	1,619 73	1,598 46	1,644 02
Sewer Department	52,893 68	42,324 49	40,597 04	92,635 43	87,553 59	106,688 27	64,231 45	52,828 90	84,996 28
Sinking Fund	75,170 00	91,770 00	104,095 00	100,390 00	106,940 00	93,765 00	104,725 00	111,937 50	118,750 00
State Aid	22.693 05	25,262 30	25,469 80	24,669 55	23,159 91	23,209 03	23,491 36	28,751 62	27,218 27
Stationery and Printing	2.998 70	2,677 87	2,533 89	2,739 13	2,843 14	2,939 79	2 847 32	2,869 03	2,983 88
Street Dept. (Roads and Bridges)	299,284 55	310,948 66	243,032 63	285,348 54	259,953 37	323,912 86	412,986 18	249,167 53	326,637 84
Treasury Department	11,629 03	11,680 62	12 179 00	12,542 01	13,471 50	13,995 46	14,415 54	14,282 77	14,699 53
Water Works Department	297,901 16	497,772 78	430,846 12	420,688 47	758,054 81	1,045,529 76	794,197 98	634,583 00	367,048 88
Taxes: —									
Abatements	19,719 39	23,647 67	24,678 10	26,926 07	19,427 40	17,922 54	22,081 73	27,566 98	35,317 61
County	49,851 13	60,845 07	63,569 57	68,110 25	73,887 84	78,321 11	73,887 84	79,914 80	87,085 65
Metropolitan Sewer	.....	6,809 57	17,363 62	45,483 43	61,886 21	....	137,297 30	56,818 94	74,763 08
National Bank	6,851 10	7,459 69	6,659 26	7,372 24	7.136 92	6,632 77	7,995 91	7,459 91	7,681 26
State	46,440 00	54,495 00	77,850 00	62,280 00	46,800 00	54,600 00	54,600 00	48,195 00	48,195 00
Total	$1,827,687 63	$2,102,201 62	$2,029,829 49	$2,467,001 85	$2,729,717 48	$3,131,115 43	$3,075,103 20	$2,739,688 33	$2,712,598 25

APPROPRIATIONS AND EXPENDITURES

The Amount of the Several Appropriations made by the City Council during the Year — The Transfers from One Appropriation to Another — The Expenditures in Detail under each Appropriation, and the Unexpended Balances, November 30, 1899.

APPROPRIATIONS AND EXPENDITURES

ASSESSORS' DEPARTMENT.

Appropriation			$13,500 00
	EXPENDED.		
For Salaries of Assessors: —			
John M. Davis	$2,000 00		
J. G. Gooch	2,000 00		
A. J. Green	2,000 00		
Assistant Assessors: —			
Warren Ivers	360 00		
George H. Munroe	378 00		
Robert A. Parry	332 00		
Daniel B. Shaughnessy	224 00		
Arthur M. Stewart	324 00		
Clerks: —			
Carrie A. Estes	720 00		
Helen P. Hooker	720 00		
Jessie I. R. Waterman	720 00		
Temporary Clerks	2,556 30		
		12,334 30	
Abstracts, Byron Boyd		25 00	
Carriage hire, Ralph Smith & Co.		10 00	
Car tickets, Boston Elevated Railway Company		70 00	
Directories: —			
E. F. Hunt & Co.	$3 00		
Sampson, Murdock & Co.	5 00		
		8 00	
List of shareholders, Lake Superior Copper Mining Companies, Horace J. Stevens, Houghton, Mich.		30 00	
Stationery, printing, etc.: —			
Cambridge Chronicle Company	$598 00		
Cotton & Gould	190 75		
E. W. S. Jones	100 50		
Stationery Department	98 15		
		987 40	
Subscription, Banker and Tradesman		5 00	
Sundries		3 65	
Telephone rent and tolls		15 75	
Total			$13,489 10
Balance unexpended			$10 90

AUDITING DEPARTMENT.

Appropriation			$3,500 00
	EXPENDED.		
For Salaries of —			
City Auditor, Harry T. Upham	$2,100 00		
Clerk, Esther L. Cogan	782 50		
Temporary Clerks	206 00		
		$3,088 50	
Binding, J. H. H. McNamee		7 00	
Directory, E. F. Hunt & Co.		3 00	
Stationery, Printing, etc.: —			
Warren T. Billings	$35 25		
Caustic & Claflin	36 68		
Cotton & Gould	24 17		
Edw. F. McKenna	31 75		
Powell & Co.	19 50		
Stationery Department	55 77		
Thorp & Martin Co.	66 20		
John Wilson & Son	86 50		
		355 82	
Subscriptions		4 50	
Sundries		3 90	
Telephone rent		8 16	
Total			3,470 88
Balance unexpended			$29 12

BRIDGE DEPARTMENT.

Appropriation			$16,500 00
	RECEIVED.		
For Rents, Wharfage, etc.		$713 43	
	EXPENDED.		
For Salaries of			
Bridge Commissioner and Harbor Master, Wm. J. Marvin	$800 00		
Clerk, Chas. S. Parsons	250 00		
Draw-tenders and Assistants	6,551 33		
		7,601 33	
Advertising		16 38	
Car tickets, Boston Elevated Railway Company		50 00	
Cash paid for labor and supplies: —			
M. F. Corkery	$65 97		
Jas. A. Gorman	14 30		
A. W. Smith	9 71		
N. E. Story	172 72		
		262 70	
Amounts carried forward		$7,930 41	$16,500 00

Amounts brought forward		$7,930 41	$16,500 00
For Current for Harvard Bridge Draw, Cambridge Electric Light Company		12 50	
Damages: —			
Sidney A. Fisher	$77 50		
James Murnaghan	12 50		
		90 00	
Fuel: —			
Metropolitan Coal Company . .	$212 37		
Thomas & Pike	15 44		
		227 81	
Furniture and bedding: —			
John H. Corcoran & Company .	$7 07		
Phillips Bros. & Company . .	8 52		
		15 59	
Hardware, tools and supplies: —			
Boston Woven Hose Company .	$7 87		
Dodge, Haley & Company . .	33 47		
L. A. Stingel	25 54		
F. A. White	73 99		
Whittier Hardware Company .	11 41		
Sundry persons	17 20		
		169 48	
Heating apparatus repairs: —			
J. T. Batcheller	$2 55		
G. L. Stewart	21 12		
		23 67	
Ice: —			
Boston Ice Company . . .	$6 00		
Drivers' Union Ice Company . .	6 75		
		12 75	
Labor: —			
P. A. Berkly, Jr.	$21 78		
Thomas Daisy	10 00		
Michael Hanify	43 92		
Hugh Keenan	253 00		
S. McDonald	22 14		
		350 84	
Lighting: —			
Boston Electric Light Company .	$16 10		
Brookline Gas Light Company .	122 50		
Cambridge Electric Light Company	1,596 20		
Welsbach Street Light Company .	480 00		
		2,214 80	
Lumber and Cement: —			
John S Clary	$90 29		
Geo. W. Gale Lumber Company .	24 87		
G. H. Jennings	56 67		
Geo. McQuestion & Co . . .	103 31		
E. D. Sawyer & Co. . . .	98 89		
Wm. H. Wood & Co. . . .	417 32		
		791 35	
Amounts carried forward		$11,839 20	$16,500 00

Amounts brought forward		$11,839 20	$16,500 00
For oils, paints, etc.: —			
Leonard & Ellis	$7 50		
Merrill, Dexter & Co.	88 38		
Proctor Bros.	1 50		
Standard Oil Company	10 40		
		107 78	
Painting, Samuel Robinson		170 37	
Repairing bridges: —			
Thomas J. Emery	$28 79		
L. M. Ham & Co.	2 50		
Miller & Shaw	438 30		
William L. Miller	140 00		
John T. Scully	1,337 66		
		1,947 25	
Repairing and cleaning roadway: —			
John Donovan	$7 50		
Austin Ford & Son	228 05		
Thos. Ingraham	65 50		
Chas Linehan	3 00		
		304 05	
For repairing row-boat, G. Farrell		8 75	
Salt, Eastern Salt Co		12 67	
Sheathing bridge, Ross & Fowler		1,497 00	
Stationery and printing: —			
City of Boston	$24 77		
J. L. Fairbanks & Co.	13 10		
		37 87	
Telephone rent and tolls		5 75	
Typewriting, A. R. Andrews		4 80	
Water rates, City of Boston		32 50	
Total			15,967 99
Balance unexpended			$532 01

CAMBRIDGE BRIDGE.

Appropriation			$45,464 59
Add revenue			4,000 00
			$49,464 59
RECEIVED.			
For right of way on temporary bridge, Boston Elevated Railway Company		$4,000 00	
EXPENDED.			
For Salaries: —			
Commissioner, E. D. Leavitt	$1,249 92		
Chief Engineer, Wm. Jackson	1,500 00		
Assistant Secretary, Walter G. Davis	483 33		
Engineer, Robert A. Shaeler	25 00		
Amounts carried forward	$3,258 25		$49,464 59

Amounts brought forward . . .	$3,258 25		$49,464 59
For Salaries: —			
Assistant Engineers: —			
John E. Cheney	1,080 52		
F. P. Spalding	225 37		
M. G. Woodward . . .	25 50		
S. A. Jubb	590 00		
Draughtsmen: —			
George H. Hayward . . .	494 00		
H. F. Sawtelle	280 00		
Transit-man, H. A. Wilson . .	188 01		
Rod-man, John F. Gorman . .	33 00		
Leveler, George E. Harkness . .	33 00		
Inspector, Daniel A. Story . .	230 00		
Axeman, F. J. Steele . . .	154 00		
Messenger, John Mountain . .	27 00		
		6,618 65	
Advertising		59 71	
Boat, L. W. Ferdinand & Co. . .		32 50	
Boots, Hosmer, Codding & Co. . .		1 78	
Borings, etc., E. A. Clark . . .		99 39	
Building temporary bridge, Benjamin Young		15,935 62	
Building draw and piers, William J. Lawler		10,417 15	
Carriage hire: —			
Boston Cab Co.	6 00		
Kenney & Clark	25 00		
		31 00	
Cash expended for travelling expenses and sundries: —			
Wm. Jackson	$25 56		
Edmund M. Wheelwright . . .	286 33		
Walter G. Davis	36 53		
		348 42	
Cutting stone, Austin Ford & Son .		22 50	
Dredging, N. E. Dredging Company .		2,100 00	
Examining estate, L. M. Hannum .		40 00	
Expenses, making approach to new Cambridge Bridge, City of Boston . . .		353 28	
Expressage, Dodge's Express Company		1 12	
Hardware: —			
Appleton & Bassett	$14 08		
Dodge, Haley & Co.	3 02		
F. A. White	9 75		
A. J. Wilkinson & Co. . . .	2 08		
M. G. Woodward	3 40		
		32 33	
Amounts carried forward		$36,093 45	$49,464 59

Amounts brought forward		$36,093 45	$49,464 59
Iron work, Miller & Shaw		1,107 38	
Labor, as per pay-rolls		572 61	
Lantern slides, Whitney & Son		2 25	
Land, Park Commissioners		3,782 83	
Lumber: —			
Geo. W. Gale Lumber Co.	$157 36		
Wm. H. Wood & Co.	13 35		
Lunches: —			
J. R. Whipple & Co.	3 10		
Daniel P. Wise	35 25		
		209 06	
Motors, General Electric Company		275 78	
Photographs and albums, Soule Photograph Co.		10 27	
Plans, etc., Edmund M. Wheelwright		1,933 18	
Services as constable, Jas. E. Lennon		5 65	
Stationery and printing: —			
Cambridge Chronicle Company	2 25		
City of Boston	11 54		
J. L. Fairbanks & Co.	15 50		
		29 29	
Stone, Chas. McMahon		635 43	
Typewriting		4 50	
Use of table furnishings, Daniel P. Wise		20 05	
Total			44,681 73
Balance unexpended			4,782 86

CEMETERY DEPARTMENT.

Appropriation			$21,500 00
RECEIVED.			
For brick and slate graves and foundations	$1,178 65		
Burials	4,521 05		
Care of lots	3,003 26		
Chapel	15 00		
Grading and sodding	130 09		
Grass	45 00		
Interest on Cemetery Fund	1,656 72		
Junk	10 00		
Myrtle graves	16 00		
Sale of lots	5,335 05		
Wood	67 50		
Sundries	155 58		
		$16,133 90	
Amount carried forward			$21,500 00

Amount brought forward			$21,500 00
	EXPENDED.		
For Salaries of			
Superintendent, Chas. S. Childs .	$1,600 00		
Asst. Superintendent, Henry C. Hobbs	1,003 75		
Bookkeeper, J. Watson Taylor . .	1,095 00		
Clerk, Edward J. Brandon . .	100 00		
Laborers, as per pay-rolls . .	12,320 36		
		$16,119 11	
Advertising, Daniel A. Buckley . .		8 50	
Board walk, Steadman A. Rice . .		6 73	
Bricks: —			
Parry Bros. & Co.	$18 00		
M. W. Sands	50 05		
		68 05	
Broom stock, Stephen Adams . .		8 00	
Building graves, J. Delaney . .		23 80	
Carriage hire, Chas. W. Dailey . .	$10 00		
F. P. Merrill	13 00		
George F. Whiting & Co. . . .	34 50		
		57 50	
Decorating monument, M. C. Beedle		6 00	
Dinners, Colonial Club		36 00	
Directories, W. A. Greenough & Co.		6 00	
Examining titles, Wm. V. Thompson .		50 00	
Expressage, Hatch & Co. . . .		6 76	
Filling and loam, Jeremiah Sullivan .		194 20	
Fuel, Coleman Bros. . . .	$8 00		
Dennis, Thompson, Pierce Co. .	47 55		
		55 55	
Granite tablets, Alex. Wight . .		322 88	
Gravel, Thomas O'Hara . . .	$20 00		
Jeremiah Sullivan	33 12		
		53 12	
For Grave-boxes and covers: —			
Joseph W. Grigg	$29 56		
Wm. L. Lockhart & Company . .	26 50		
		56 06	
Hardware, tools and repairs, and supplies: —			
Joseph Breck & Sons . . .	$43 62		
Burditt & Bynner	60 01		
Chapman Carriage Co. . . .	32 77		
Water Works	5 15		
F. A. White	29 87		
D. J. Wild & Co.	7 85		
		179 27	
Hay and grain, E. R. Luke & Co. .		136 21	
Amounts carried forward		$17,393 74	$21,500 00

Amounts brought forward		$17,393 74	$21,500 00
Horse shoeing: —			
Wm. Palmer	$5 00		
G. W. Lowd	6 00		
Street Department	7 10		
		18 10	
Lumber and cement: —			
Fiske, Homes & Co.	$8 80		
George W. Gale Lumber Co.	400 19		
D. W. Lewis	11 00		
		419 99	
Lunch, M. R. Jones		6 00	
Manure: —			
John Doody	$17 00		
Jeremiah Sullivan	117 00		
		134 00	
Mill work, J. H. Keenan Company		26 73	
Pipe and cement, D. W. Lewis	$44 10		
Portland Stone Ware Company	312 38		
		356 48	
Plants and shrubs: —			
H. L. Cameron	$68 00		
P. O'Brien & Son	18 50		
Shady Hill Nursery Company	6 90		
		93 40	
Plumbing, D. J. Wild & Co		19 04	
Repairing roofs, John J. Blevins		31 55	
Sign posts, Broadway Iron Foundry		11 40	
Slate grave vaults, H. H. Matthews & Co.		104 25	
Sods, James Gray		251 25	
Stationery, printing and postage: —			
Amee Bros.	$18 90		
Edward J. Brandon	40 00		
Caustic & Claflin	113 34		
Frank M. Small	40 00		
Edward W. Wheeler	29 00		
		241 24	
Stones (cobble), Thomas O'Hara		8 00	
Stone and stone-dust, James Gray		297 90	
Stone work, Wm. A. McNamee		40 80	
Sundries		34 77	
Teaming: —			
John Doody	$5 00		
Thomas O'Hara	22 50		
Jeremiah Sullivan	138 00		
		165 50	
Amounts carried forward		$19,654 14	$21,500 00

Amounts brought forward		$19,654 14	$21,500 00
Telephone rent and tolls		85 59	
Tide-gate fitted, Barbour, Stockwell Co.		15 00	
Trees, Jacob W. Manning		22 15	
Use of pump, George E. Worthen		37 50	
Watering :—			
City of Cambridge	$51 46		
Joseph Ray	23 00		
		74 46	
Water Supply pipes, Water Works		21 39	
Total			19,910 23
Balance unexpended			$1,589 77

CITY CLERK DEPARTMENT.

Appropriation			$7,700 00
	RECEIVED.		
For Fees from sundry persons		$2,401 20	
	EXPENDED.		
For Salaries of :—			
City Clerk, Edward J. Brandon	$3,000 00		
Assistant City Clerk, Albert M. Pear	1,400 00		
Clerks :—			
Amanda Richardson	600 00		
Annie E. Conley	421 35		
Temporary Clerks :—			
Sarah S. Jacobs	201 90		
Annie Jacobs	275 00		
Margaret A. Dayton	93 00		
		5,991 25	
Advertising :—			
Daniel A. Buckley	$6 00		
Sundry persons	9 06		
		15 06	
Binding, J. H. H. McNamee		64 13	
Canvassing :—			
James H. Cox	$34 50		
Arthur L. Farrell	52 50		
Warren Ivers	42 00		
James E. Lennon	66 00		
George H. Munroe	39 00		
Frederic L. Murray	30 00		
Chas. E. Simpson	27 00		
Patrick J. White	45 00		
		336 00	
Amounts carried forward		$6,406 44	$7,700 00

Amounts brought forward		$6,406 44	$7,700 00
Car tickets, Boston Elevated Railway Co.		5 00	
Case, The M. Ohmers Sons Co. . .		14 00	
Directory, Sampson, Murdock & Co. .		5 00	
Expressage, Sundry persons . .		7 63	
Files, Chas. D. Craigie		5 40	
Paste, W. H. Lertora		10 08	
Posting and serving notices :—			
James H. Cox	$23 60		
Walter F. Hayward	14 90		
James E. Lennon	20 80		
Sundry persons	6 00		
		65 30	
Postage, Edward J. Brandon . .		11 80	
Recording deeds, E. O. Childs . .		25 28	
Reporting births		468 25	
Stamps :—			
Boston Stencil and Stamp Works .	$14 10		
J. T. Powers & Co. . . .	12 00		
		26 10	
For stationery, printing and typewriting supplies : —			
Amee Bros	$6 75		
W. T. Billings	12 50		
Alvah Bushnell Co.	5 00		
Cambridge Chronicle Co. . . .	24 50		
Caustic & Claflin	5 25		
Cotton & Gould	85 27		
J. Frank Facey	107 10		
John H. Ford	16 00		
E. W. S. Jones	25 25		
Edw. F. McKenna	14 75		
Henry M. Meek	23 50		
D. B. Shaughnessy	7 00		
Stationery Department . . .	87 25		
Sundry persons	5 25		
Edward W. Wheeler	8 50		
		433 87	
Subscription, Cambridge Chronicle Co.,		5 00	
Sundries		9 00	
Telephone rent and tolls . . .		111 69	
Typewriter, The Jackson Typewriter Selling Co.		85 00	
Total			7,694 84
Balance unexpended			$5 16

CITY CLERK DEPARTMENT.

Printing Town Records.

Appropriation	$1,080 00

EXPENDED.

For Clerical Assistance, Sarah S. Jacobs	$177 50	
Total		$177 50
Balance unexpended		$902 50

CITY CLERK DEPARTMENT.

Russell Memorial.

Appropriation	$360 00

EXPENDED.

For Insurance, Fisk & Odiorne	$3 50	
Total		$3 50
Balance unexpended		$356 50

CITY MESSENGER DEPARTMENT.

Appropriation			$2,700 00

EXPENDED.

For Salaries of: —			
City Messenger, Francis L. Pratt	$1,800 00		
Assistant, C. M. Jones	102 00		
Assistant, Frank T. Evans	262 00		
		2,164 00	
Car Tickets: —			
Boston Elevated Railway Company		45 00	
Expressage, Hatch & Co.		21 29	
Rent of Post Office Box: —			
H. A. Thomas		10 00	
Stationery and Printing: —			
Cambridge Chronicle Company	5 50		
Stationery Department	121 20		
		126 70	
Subscriptions		9 00	
Sundries		11 50	
Telephone rent and tolls		168 45	
Total			2,555 94
Balance unexpended			$144 06

CIVIL SERVICE DEPARTMENT.

Apropriation			$250 00
EXPENDED.			
For Salary of Clerk, Harry L. Lincoln		200 00	
Oak Cabinet, Derby Desk Co.		25 00	
Stationery, Thorp & Martin Co.		22 05	
Total			247 05
Balance unexpended			$2 95

CLERK OF COMMITTEES DEPARTMENT.

Appropriation			$4,000 00
EXPENDED.			
For salaries of: —			
Clerk of Comittees, John McDuffie	2,400 00		
Assistant, Eben W. Pike	1,200 00		
		3,600 00	
Binders, David Farquhar		6 00	
Boxes, The Globe Co.		13 50	
Car tickets, Boston Elevated Railway Company		10 00	
Stationery, printing and typewriting supplies: —			
W. T. Billings	15 00		
Cambridge Chronicle Company	89 08		
Cotton & Gould	51 10		
J. A. Cummings Printing Company	6 30		
Edw. F. McKenna	5 70		
The Neostyle Company	23 25		
George H. Richter & Company	6 00		
Stationery department	114 42		
		310 85	
Stamps, T. S. Buck		4 85	
Sundries		23 70	
Total			3,968 90
Balance unexpended			$31 10

CONTINGENT FUND.

Appropriation	$16,000 00
Transferred from sundry departments	3,900 00
	$19,900 00
Transferred to sundry departments	6,607 59
Amount carried forward	$13,292 41

Amounts brought forward . . .			$13,292 41
RECEIVED.			
For fee returned		$1 00	
Hawkers' and pedlers' licenses . .		175 00	
Liquor licenses		52 00	
Old taxes		14 00	
Refund Chas. A. Brown		33 52	
Settlement of suit		430 37	
		705 89	
EXPENDED.			
Annual Digest: —			
Little, Brown & Co.	$4 50		
West Publishing Co.	60 00		
		64 50	
Binding Rindge Album: —			
J. H. H. McNamee		12 00	
Car tickets for Co. B Fifth Regiment .		100 00	
City Council expenses: —			
Salaries: —			
Clerk, Edw. A. Counihan . .	$300 00		
Page, Chas. M. Jones . . .	100 00		
Car tickets, Boston Elevated Railway Company	600 00		
Carriage hire	64 50		
Engrossing resolutions: —			
Frank L. Wells	58 00		
John R. Wilson	1 00		
Refreshments	15 55		
Expenses of Committees: —			
Committee on Accounts: —			
Refreshments	13 00		
Committee on Bath Houses: —			
Carriage hire	42 00		
Refreshments	13 60		
Committee on Claims: —			
Carriage hire	3 00		
Refreshments	29 05		
Committee on Clay Pits: —			
Carriage hire	5 00		
Committee on Engineering Department: —			
Refreshments	10 00		
Amounts carried forward . .	$1,254 70	$176 50	$13,292 41

Amounts brought forward . . .	$1,254 70	$176 50	$13,292 41
For Committee on Finance: —			
Refreshments	54 00		
Committee on Fire Department: —			
Carriage hire	35 00		
Refreshments	10 00		
Committee on Health Department: —			
Carriage hire	8 00		
Refreshments	10 00		
Committee on Lamps: —			
Carriage hire	14 00		
Refreshments	9 90		
Committee on Licenses: —			
Carriage hire	16 00		
Refreshments	10 00		
Committee on Public Property: —			
Carriage hire	76 00		
Refreshments	54 65		
Committee on Roads and Bridges: —			
Carriage hire	63 00		
Refreshments	131 15		
Travelling expenses	350 00		
Committee on Sewers: —			
Carriage hire	10 00		
Refreshments	8 00		
Committee on Water Supply: —			
Carriage hire	10 00		
Floral emblems: —			
Walter H. Murdock	$10 00		
P. O'Brien & Son	65 00		
Printing City Charter: —			
J. A. Cummings Printing Company	25 00		
Stenographic reports: —			
Nora A. Dwyer	71 60		
G. W. Sanborn	10 00		
		2,306 00	
Amounts carried forward		$2,482 50	$13,292 41

Amounts brought forward		$2,482 50	$13,292 41
For damages awarded and suits settled:—			
Jeanette M. Bailey	$1,492 18		
Annie Balfe	250 00		
John J. Brassill	159 00		
Alice M. Budden	200 00		
John F. Dillon	6 50		
John E. Dwyer	40 00		
Rose Anna Gately	100 00		
John J. Horan	200 00		
Chas. A. Kimball	10 00		
Otto A. Lindberg	35 00		
Bridget Lynch	125 00		
Thos. F. Mahoney	35 00		
Julia Marooney	850 00		
Edward E. Mason	50 00		
W. Lloyd McGregor	5 00		
Daniel Murphy	300 00		
Oliver F. Nudd	3 00		
Mary O'Connor	50 00		
Jeremiah Regan	200 00		
Geo. A. Sawyer	1,900 00		
Michael Sinkovitz	25 00		
Mary Louisa Smith	325 00		
Raymond Smith	50 00		
Johanna Walsh	100 00		
Nellie L. White	100 00		
Jas. N. Whitlock	199 22		
		6,809 90	
Examination of titles, Wm. V. Thompson		133 00	
Expenses of Fourth of July celebration:—			
Carpentry, W. H. Norris	$14 40		
Cash expended for sundries, John J. Ahern	4 75		
Fireworks, Pain's Fireworks Co.	300 00		
Lighting, Cambridge Electric Light Company	27 55		
Printing, J. Frank Facey	57 84		
Prizes:—			
John B. McCloskey	200 00		
D. E. Ryan	50 00		
Refreshments, M. R. Jones	15 00		
Sanction of games, Kilburn Adams	10 00		
Services:—			
T D. Flynn	5 00		
Jas. Follen	31 00		
John F. Moakley	16 00		
Amounts carried forward	$731 54	$9,425 40	$13,292 4

Amounts brought forward . . .	$731 54	$9,425 40	$13,292 41
For music: —			
Cambridge Cadet Band . . .	50 00		
Cambridge City Band . . .	50 00		
Cambridge Manual Training School Band	75 00		
Teaming, Wm. F. Colby . . .	2 00		
Use of chairs, Brock Bros. . .	7 50		
		916 04	
Expenses of reception to Co. B, Fifth Regiment: —			
Carriage hire: —			
C. H. Lake	$5 50		
F. P. Merrill	5 50		
Cigars: —			
Peter P. Bleiler	13 00		
Holderer & Macdonald . . .	24 00		
Peter LeFrancis & Sons .	13 00		
Decorations, N. E. Decorating Co. .	30 00		
Dinners, Jesse A. Dill & Co. . .	375 20		
Floral decorations, Wm. E. Doyle .	25 00		
Postage	5 50		
Printing: —			
Cambridge Chronicle Co. . .	10 25		
J. Frank Facey	25 75		
Rent, Union Hall Association . .	30 00		
Ringing bells	13 00		
Music Manual Training School Band	75 00		
Services in coat-room, D. L. Jackson	7 00		
Use of chairs, Marshall L. Wilder .	10 00		
Use of piano, Mrs. G. Pettes . .	3 00		
		670 70	
Inauguration Day expenses: —			
Flowers, P. O'Brien & Son . . .		25 00	
Invalid tax titles, Richard Fenwick .		31 30	
Liquor licenses, Commonwealth of Massachusetts		13 50	
Memorial Day expenses		1,000 00	
Rebate on Park Betterment: —			
Isadore I. Foster	$ 10 64		
Alex. McDonald	403 80		
		414 44	
Rebate on taxes for 1898: —			
Horace O. Bright	$55 42		
Geo. G. Crocker et al, Trustees .	44 38		
Mary G. Fisk	25 74		
Heirs of Benjamin Tilton . . .	18 64		
		144 18	
Amounts carried forward . .		$12,640 56	$13,292 41

Amounts brought forward		$12,640 56	$13,292 41
For recording deeds, E. O. Childs		3 35	
Ringing bells on holidays		91 00	
Sinking Funds:—			
Salaries of Treasurer of Sinking Fund, Wm. W. Dallinger	$300 00		
Secretary of Sinking Fund, John McDuffie	25 00		
Rent of box, Boston Safe Deposit and Trust Company	40 00		
		365 00	
Total			13,099 91
Balance unexpended			$192 50

ELECTION EXPENSES, CITY CLERK.

Appropriation			$5,100 00
EXPENDED.			
For Precinct Officers		$3,046 50	
Police Officers		280 00	
Bell ringers		26 00	
Clerical assistance:—			
Annie E. Conley	$40 00		
Margaret A. Dayton	36 75		
Anne Jacobs	25 00		
		101 75	
Advertising:—			
Warren T. Billings	$47 00		
D. A. Buckley	240 75		
Cambridge Chronicle Company	4 87		
F. S. Hill	59 00		
Review Publishing Company	12 00		
Times Publishing Company	59 00		
		422 62	
Ballot boxes:—			
Commonwealth of Massachusetts	$62 50		
W. H. Norris	20 00		
		82 50	
Barge hire:—			
A. Nixon	$18 00		
John Nixon	120 00		
		138 00	
Binding, etc., J. H. H. McNamee		78 44	
Boxes, Chas. Place		2 50	
Card signs, C. H. Buck & Co.		3 00	
Amounts carried forward		$4,181 31	$5,100 00

Amounts brought forward		$4,181 31	$5,100 00
For carriage hire: —			
Aaron Hale	$15 00		
Jas. P. Rourke	4 00		
Geo. F. Whiting & Co.	18 50		
		37 50	
Car tickets, Boston Elevated Railway Company		10 00	
Caucus laws, Richard L. Gay		9 00	
Expressage and teaming		19 59	
Hardware and supplies, Burditt & Bynner		30 71	
Labor, T. J. Denton		74 79	
Lunches: —			
Oriental Tea Company	$9 54		
W. S. Sprague	24 72		
		34 26	
Posting and serving: —			
Jas. H. Cox	$4 50		
Jas. E. Lennon	3 00		
Geo. H. Munroe	25 50		
P. J. White	6 00		
		39 00	
Preparing ballot boxes, Chas. M. Jones		5 00	
Repairing ballot boxes: —			
Hall Bros.	$2 25		
Edgar Hall	21 75		
		24 00	
Stamps and pads: —			
Boston Stencil and Stamp Works		13 50	
Stationery, printing and postage: —			
Warren T. Billings	$6 00		
Cambridge Chronicle Company	46 25		
Caustic & Claflin	105 47		
Co-operative Press	16 25		
Cotton & Gould	33 50		
J. Frank Facey	306 50		
Edw. F. McKenna	9 50		
Stationery Department	58 62		
E. W. Wheeler	26 25		
		608 34	
Sundries		3 00	
Tabulating: —			
Henry T. Burrage	$4 00		
George Davis	6 00		
		10 00	
Total			$5,100 00

ELECTION EXPENSES, REGISTRARS OF VOTERS.

Appropriation			$3,500 00
EXPENDED.			
For salaries of Registrars of Voters and clerk:—			
Wm. J. Breen	$500 00		
James Cox	500 00		
Frederick W. McDonald	500 00		
Isaac S. Pear	600 00		
		$2,100 00	
Clerical assistance, Anne Jacobs		186 25	
Clerical assistance at recount, Warren Ivers		4 80	
Advertising:—			
W. T. Billings	$19 50		
D. A. Buckley	21 00		
F. S. Hill	19 25		
Times Publishing Company	21 00		
		80 75	
Boards for voting lists, W. H. Norris		189 90	
Books, E. W. S. Jones		24 30	
Carriage hire, Aaron Hale		3 00	
Directory, E. F. Hunt & Co.		3 00	
Mounting lists, J. H. H. McNamee		51 55	
Posting, Geo. H. Munroe		29 50	
Stationery, printing and postage:—			
W. T. Billings	$2 50		
Cambridge Chronicle Company	25 75		
Stationery department	4 69		
John Wilson & Son	757 92		
		790 86	
Steps, F. A. Walker & Company		3 84	
Sundries		3 03	
Total			3,470 78
Balance unexpended			$29 22

ELECTION EXPENSES, SUPERINTENDENT OF PUBLIC BUILDINGS.

Appropriation			$1,800 00
EXPENDED.			
For Carpentry, W. H. Norris		$494 10	
Furniture, Phillips Bros. & Co.		4 00	
Lighting apparatus, Geo. F. Dickson		29 25	
Moving booths, H. S. Angus & Son		30 00	
Preparing rooms for voting		262 72	
Amounts carried forward		$820 07	$1,800 00

Amounts brought forward . . .		$820 07	$1,800 00
For rent: —			
Charles Beck Post No. 56, G. A. R. .	$50 00		
J. S. Becker & Co.	51 00		
Citizens' Trade Association . .	80 00		
Mt. Sinai Building Association . .	20 00		
Odd Fellows' Hall Association . .	40 00		
John F. O'Brien	40 00		
The Prospect Union	40 00		
Red Jacket Veteran Firemen's Association	35 00		
St. John's Literary Institute . .	80 00		
Union Hall Association . . .	110 00		
		546 00	
Sundries		4 00	
Teaming, Wm. F. Colby		8 00	
Total			1,378 07
Balance unexpended			$421 93

ENGINEERING DEPARTMENT.

Appropriation			$11,000 00
RECEIVED.			
For services of City Engineer . .		$500 00	
EXPENDED.			
For Engineer, L. M. Hastings . .	$3,000 00		
Assistants	6,616 10		
Clerk, Mary E. Rowen . . .	391 25		
		10,007 35	
Appraising damages :—			
R. & C. G. Wentworth . . .		25 00	
Boots, Leighton Bros. & Co. . .		8 00	
Car tickets, Boston Elevated Railway Co.		150 00	
Cash expended for travelling expenses :—			
L. M. Hastings		9 12	
Furniture, Webster, Cook & Co. . .		72 00	
Hardware, tools and repairs, and supplies :—			
C. L. Berger & Sons	$14 95		
Hall Brothers	8 00		
James Maitland	10 62		
W. H. Norris	5 00		
F. A. White	19 92		
		58 49	
Making estimates of cost of moving buildings, H. S. Angus & Son .		30 00	
Amounts carried forward		$10,359 96	$11,000 00

Amounts brought forward		$10,359 96	$11,000 00
For photograph supplies and blue prints :—			
Chas E. Moss		6 47	
Repairs, Water Works		6 64	
Stationery, printing and drawing materials :—			
Cambridge Chronicle Company	9 00		
Caustic & Claflin	10 20		
Cotton & Gould	40 30		
John H. Ford	29 70		
Frost & Adams Company	125 04		
Heliotype Printing Company	39 00		
E. G. Soltmann	54 65		
Stationery Department	35 52		
		343 41	
Sundries		32 57	
Telephone rent and tolls		163 20	
Typewriter, Smith Premier Typewriter Company		74 50	
Total			$10,986 75
Balance unexpended			$13 25

ENGINEERING DEPARTMENT, ASSESSORS' PLANS.

Appropriation			$300 00
EXPENDED.			
For Services of Engineers		$238 10	
Total			$238 10
Balance unexpended			$61 90

EXECUTIVE DEPARTMENT.

Appropriation			$5,200 00
EXPENDED.			
For salaries of : —			
Mayor, Alvin F. Sortwell	$291 67		
Mayor, Edgar R. Champlin	3,208 33		
Clerk, Edward A. Counihan	1,000 00		
Stenographer, Georgie W. Sanborn	255 82		
Clerical assistance, J. Henry Webber	7 00		
		$4,762 82	
Car tickets, Boston Elevated Railway Company		10 00	
Amounts carried forward		$4,772 82	$5,200 00

Amounts brought forward		$4,772 82	$5,200 00
For stationery, printing and typewriting supplies: —			
Caustic & Claflin	$23 55		
Cotton & Gould	31 32		
J. Frank Facey	10 50		
John A. Lowell & Company.	12 70		
Stationery department	74 90		
M. R. Warren Company	16 00		
		168 97	
Sundries		32 79	
Telephone rent and tolls		145 55	
Typewriter, Smith Premier Typewriter Company		62 75	
Total			5,182 88
Balance unexpended			$17 12

FILLING CITY LANDS.

Appropriation	$1,407 25
Transferred from Contingent Fund	225 00
	$1,632 25

EXPENDED.

For assessment for tide-water displaced, filling flats in Charles River: —			
Commonwealth of Massachusetts		$193 95	
Filling City Lands: —			
N. E. Dredging Co.		1,430 85	
Total			1,624 80
Balance unexpended			$7 45

FIRE DEPARTMENT.

Appropriation			$85,000 00

RECEIVED.

For board of horse	$100 00		
Horses	75 00		
Hose	7 85		
		182 85	

EXPENDED.

For salaries of			
Chief Thomas J. Casey	$1,800 00		
Amounts carried forward	$1,800 00		$85,000 00

Amounts brought forward . . .	$1,800 00		$85,000 00
For Assistant Engineers: —			
N. W. Bunker	375 00		
W. B. Cade	312 50		
Permanent men as per pay-rolls . .	48,332 72		
Call men, as per pay-rolls . .	17,550 48		
		68,370 70	
Apparatus and repairs: —			
Chas. E. Berry	$32 50		
Wm. Campbell & Co.	348 23		
Chapman Carriage Company . .	188 70		
Samuel Eastman & Company . .	150 00		
F. Ivers & Son	12 00		
T. H. Kneeland	18 00		
George H. Lincoln & Co.	36 00		
Chas. R. Luce, agent	15 00		
Manchester Locomotive works . .	1,654 65		
C. W. H Moulton & Co. . . .	113 30		
Peter McMurray	34 65		
Miller & Shaw	17 62		
George Patterson	6 00		
Scrannage Brothers	26 36		
Sundry persons	12 96		
Chas. Waugh & Co.	61 90		
		2,727 87	
Badges and insignias, Merriam, Xavier & Boehme		22 50	
Binding, J. H. H. McNamee . .		6 00	
Brooms and brushes: —			
Holcomb & Hoke Manufacturing Co.	$9 00		
R. L. Learned	9 00		
F. Pelkey	26 50		
Somerville Brush & Mop Company .	12 00		
		56 50	
Chemicals, Carter, Carter, & Meigs .		17 92	
Copper waste, Edw. H. Haskell . .		24 38	
Disinfectants: —			
Hub Chemical Co.	$18 00		
Wm. H. Roulo & Co. . . .	13 20		
		31 20	
Dues, Gas Consumers Association .		9 00	
Electrical supplies: —			
Inspection of wires	$13 50		
Pettingell, Andrews Company . . .	7 04		
		20 54	
Amounts brought forward		$71,286 61	$85,000 00

Amounts brought forward		$71,286 61	$85,000 00
For expressage and teaming: —			
Monegle & Whitehouse	$5 00		
Savage & Son	6 70		
Sundry persons	12 80		
		24 50	
Fire hats, J. R. Hopkins		140 50	
Fuel: —			
Dennis, Thompson, Pierce Company	$1,348 95		
Metropolitan Coal Company	99 00		
Richardson & Bacon	29 75		
Weighing, H. W. Brooks	5 60		
		1,483 30	
Furniture, furnishings and bedding: —			
D. W. Hyde & Co.	$41 68		
Worcester Bros.	54 00		
		95 68	
Hardware, tools and supplies: —			
Brock Bros.	$41 59		
Burditt & Bynner	188 97		
Cambridge Hardware Company	11 28		
C W. Carman	8 03		
J. A. Holmes & Co.	74 38		
H. N. Hovey & Co.	12 98		
M. R. Jouett & Co.	6 82		
Mathieson Alkali Works	21 84		
J. F. Pennell	16 40		
Sundry persons	9 94		
		392 23	
Harness and repairs: —			
Chas. E. Berry	$189 75		
Owen Doherty	100 00		
F. Ivers & Son	20 55		
Wm. H. Roberts	87 30		
		397 60	
Hay, grain and straw: —			
J. S. Bradeen	$259 38		
J. Cushing & Co.	1,362 39		
P. H. Dardis	181 33		
E. R. Luke & Co.	1,590 81		
George G. Wright	121 17		
		3,515 08	
Heating buildings: —			
City Buildings Department		375 00	
Horses, P. H. Dardis		880 00	
Amounts carried forward		$78,590 50	$85,000 00

Amounts brought forward		$78,590 50	$85,000 00
For horse-shoeing : —			
Wm. Balmer	$35 25		
Wm. Bell	55 50		
D. L. Bolger & Co.	46 25		
M. Burke	67 75		
P. J. Callahan	64 50		
P. H. Dardis	23 70		
W. F. Garrett	77 38		
John F. Gurry & Sons . . .	114 00		
C. J. McCarthy	32 25		
Bernard Smith	98 75		
Thomas Smith	61 00		
		676 33	
Hose, etc , Boston Woven Hose & Rubber Company		1,596 97	
House repairs :—			
Carpentry :—			
Robert Bennett	$8 20		
W. H. Norris	271 20		
John Quin	1,063 67		
Mason work, Henry McGahey . .	25 30		
Painting and glazing :—			
J. J. Foley	62 00		
Geo. H. Hughes	5 00		
Plumbing :—			
W. Haley	11 60		
Levi Hawkes	5 35		
H. L. Rose	52 29		
		1,504 61	
Ice :—			
Cambridge Ice Company . . .	$18 00		
Fresh Pond Ice Company . . .	30 55		
Independent Ice Company . . .	5 25		
		53 80	
Inspecting boilers :—			
Everett B. Dyer, State Inspector .		18 00	
Laundry work :—			
University City Laundering Company		198 75	
Lighting :—			
Cambridge Electric Light Company .	$265 38		
Cambridge Gas Light Company .	471 40		
		736 78	
Amounts carried forward		$83,375 74	$85,000 00

Amounts brought forward		$83,375 74	$85,000 00
For lumber, George W. Gale Lumber Co.		13 87	
Mill work, M. F. Tracy & Son		22 53	
Oil, polish, etc. :—			
Cochrane Chemical Company	$28 97		
Standard Oil Company	39 36		
L. G. Wilde	6 00		
		74 33	
Packing, Gould Packing Company		7 50	
Pole, Peter McMurray		6 00	
Repairing roofs, John J. Blevins		32 53	
Shavings, C. W. H. Moulton & Co.		21 00	
Soap, Chas R. Teele		7 25	
Soaposo, Standard Chemical Co.		10 32	
Stationery and printing :—			
Cambridge Chronicle Company	$8 00		
Caustic & Claflin	8 39		
Stationery Department	6 00		
		22 39	
Sundries		17 75	
Telephone rent and tolls		140 02	
Use of men and horses :—			
T. A. Callahan	$136 00		
F. J. Coulter	96 50		
P. H. Dardis	174 50		
Elliott & Duvey	133 00		
Austin Ford & Son	214 00		
Thos. McSorley	256 00		
John J. O'Callaghan	9 00		
John D. Shea	62 00		
Michael Shea	68 00		
		1,149 00	
Total			$84,900 23
Balance unexpended			$99 77

HEALTH DEPARTMENT.

Appropriation		$18,000 00
Transferred from Contingent Fund		1,850 00
		$19,850 00

EXPENDED.

For salaries of —		
Medical inspector, Dr. E. Farnham	$3,000 00	
Secretary, James B. Soper.	1,200 00	
Clerk, B. E. Dunn	800 00	
Amounts carried forward	$5,000 00	$19,850 00

Amounts brought forward . . .	$5,000 00		$19,850 00
For Sanitary Inspectors: —			
Charles A. Lincoln	932 61		
John McCormick	939 91		
Daniel W. Parker . . .	932 61		
Drivers of vans: —			
John A. Jackson	783 13		
Richard M. O'Brien . . .	750 00		
		$9,338 26	
Analysis of ice, F. A. Dunbar . .		21 55	
Bacteriologist:—			
George B. Henshaw, M.D. . .	$720 00		
E. A. Darling, M.D. . . .	131 30		
		851 30	
Board of sundry persons at Cambridge Hospital		5,969 33	
Car tickets, Boston Elevated Railway Company		500 00	
Carriage hire: —			
M. J. Fairbanks	$21 00		
George F. Whiting & Co.	6 50		
		27 50	
Carpentry, W. H. Norris . . .		73 25	
Cash paid for burying dead animals: —			
M. J. Folsom	$6 25		
F. B. Pullen	8 75		
James B. Soper	58 70		
		73 70	
Directories, Sampson, Murdock & Co. .		5 00	
Drain work, Samuel McCulloch . .		17 53	
Drugs, prescriptions, etc.: —			
J. A. & W. Bird & Co. . . .	$41 85		
Walter A. Claflin	112 35		
		154 20	
Frames, Vickery & Co.		8 75	
Fuel, Wellington & Buck . . .		36 00	
Furniture and furnishings: —			
The Globe Co.	$26 80		
C. B. Moller	32 45		
		59 25	
Amounts carried forward		$17,135 62	$19,850 00

Amounts brought forward		$17,135 62	$19,850 00
Harness and repairs: —			
M. Cavanagh	$17 25		
L. C. Chase & Co	13 85		
Wm. H. Roberts	7 65		
		38 75	
Horse board and storage: —			
George F. Whiting & Co.		360 00	
Horseshoeing: —			
W. F. Garrett.	$16 75		
Street Department	8 90		
		25 65	
For laboratory fittings, Higgins & Co.		11 64	
Medical supplies and apparatus: —			
Harvard Co-operative Society	$14 77		
Franklin C. Robinson	31 89		
W. C. Wright	40 00		
		116 66	
Professional services, F. G. Cook		44 00	
Plumbing, Levi Hawkes		46 38	
School Inspectors: —			
Frank F. Carr	$200 99		
George P. Coggswell	200 99		
Bessie D. Davis	200 99		
A. W. Dudley	200 99		
E. A. McCarthy	99 96		
W. A. Putnam	200 99		
N. V. Shannon	200 99		
		1,305 90	
Serving notices, etc.: —			
Fred H. Seavey	$11 26		
A. M. Stewart	5 00		
		16 26	
Stationery, printing and typewriting supplies: —			
Cambridge Chronicle Company	$211 49		
Caustic & Claflin	20 75		
Cotton & Gould	23 33		
Stationery department	14 20		
		269 77	
Sundries		60 44	
Telephone rent and tolls		250 00	
Tools, hardware and supplies: —			
Brock Brothers	$9 75		
Burditt & Bynner	25 87		
		35 62	
Use of horses, Geo. F. Whiting & Co.		18 50	
Wagon repairs, Chas. Waugh & Co.		18 85	
Total			19,754 04
Balance unexpended			$95 96

INSPECTION OF MILK AND VINEGAR.

Appropriation			$1,500 00
	RECEIVED.		
For Milk and butterine licenses		$151 00	
	EXPENDED.		
For Salary of :—			
Inspector, F. A. Dunbar	$900 00		
Assistant, J. F. Wheeler	420 00		
		1,320 00	
Bench, S. B. Withey		22 00	
Car tickets, Boston Elevated Railway Company		30 00	
Cash paid for samples, etc. :—			
J. F. Wheeler		58 74	
Evaporating dishes :—			
Franklin Educational Company		6 56	
Stationery and printing :—			
W. T. Billings	$15 50		
Caustic & Claflin	6 10		
Cotton & Gould	12 00		
Stationery Department	16 40		
		50 00	
Sundries		6 70	
Use of horse and buggy, G. Davoren		6 00	
Total			$1,500 00

INSPECTION OF PROVISIONS.

Appropriation			$800 00
	EXPENDED.		
For Salary of Inspector of Provisions : —			
C. E. Hadcock		$700 00	
Chemicals, Drugs, etc. : —			
A. R. Bayley & Co.	$9 27		
Walter A. Claflin	40 35		
Commercial Oil Company	10 50		
A. Cunningham	12 15		
L. W. Reycroft	75		
Henry Thayer & Co.	20 58		
		93 60	
Total			$793 60
Balance unexpended			$6 40

INSPECTION OF WIRES.

Appropriation			$14,500 00
RECEIVED.			
For Labor and materials		$7 86	
EXPENDED.			
For Salaries of: —			
Inspector of Wires, Charles F. Hopewell	$1,000 00		
Assistants	6,078 83		
Clerk, Lillian W. Hyde	313 00		
		7,391 83	
Apparatus, repairs and electrical supplies: —			
American Electric Works	$122 45		
American Steel and Wire Company	34 22		
Anchor Electric Company	54 64		
John C. Bean	6 22		
Bibber–White Company	96 21		
J. A. & W Bird & Co.	21 25		
Bowker, Torrey & Co.	47 00		
F. Bryant & Co.	23 26		
Cutter Electric and Manufacturing Company	15 72		
Thos. J. Daly	14 54		
W. E Decrow	2,660 69		
The Edes Manufacturing Company	101 12		
Electric Gas Light Company	99 73		
Electric Storage Battery Company	284 28		
Walter W. Field	13 95		
G. W. Hayden	18 76		
A. H. Hews & Co.	100 00		
Holtzer–Cabot Electric Company	22 73		
Edward Kendall & Sons	10 00		
Machado & Roller	136 50		
Pettingell, Andrews Company	231 65		
Simplex Electric Company	740 38		
George M. Stevens	33 00		
Frederick W. Turner	16 00		
N. E. Telephone Company	15 26		
Weston Electric Instrument Company	24 71		
Whitman & Couch	14 54		
S. S. White Dental Manufacturing Company	7 85		
A. M. Wood & Co.	14 25		
		4,980 91	
Amounts carried forward		$12,372 74	$14,500 00

Amounts brought forward		$12,372 74	$14,500 00
For Badges, C. A. Twitchell & Co.		15 00	
Bicycle repairs, J. L. Moseley		16 15	
Carpentry and mill work: —			
Ira G. Hersey	$67 09		
M. F. Tracy & Son	16 88		
		83 97	
Car tickets, Boston Elevated Railway Company		90 00	
Carriage and wagon repairs: —			
Chapman Carriage Company	$92 90		
Chas. Waugh & Co.	6 50		
		99 40	
Expressage, Sawin's Express	$33 64		
Sundry persons	8 45		
		42 09	
Furnishings, bedding, etc.: —			
The Globe Wernicke Company	$15 00		
Worcester Bros.	37 70		
		52 70	
Hardware, tools and supplies: —			
Brock Bros.	$42 76		
Burditt & Bynner	48 41		
Chapman Carriage Company	7 25		
Dover Stamping Company	7 80		
Wm. Hall & Co.	59 05		
J. D. Jewett & Co.	92 22		
Jas. H. Wyeth & Co.	21 14		
		278 63	
Harness and repairs and supplies: —			
G. A. Morse		12 00	
Heating building: —			
City Buildings Departments		100 00	
Hose, etc.: —			
Boston Woven Hose Company		10 50	
Horse board: —			
Irving Blake	$300 00		
Fire Department	100 00		
Ralph Smith & Co.	25 00		
		425 00	
Horseshoeing: —			
Wm. Balmer	$21 25		
Street Department	27 60		
		48 85	
Amounts carried forward		$13,647 03	$14,500 00

Amounts brought forward		$13,647 03	$14,500 00
For Lighting: —			
Cambridge Electric Light Company		56 40	
Lumber: —			
George W. Gale Lumber Company	$45 64		
A M Woods Company	11 00		
		56 64	
Manhole guards: —			
Walworth Construction and Supply Company		14 50	
Name plates, patterns and figures: —			
August Becker		28 18	
Oil and varnish: —			
Wardsworth, Howland & Co.		36 85	
Paper cutting, Chas. E. Perry & Co.		106 56	
Stamps and Pads, Globe Stamp Works,		5 70	
Stationery, printing and typewriting supplies: —			
Caustic & Claflin	$28 75		
Cotton & Gould	40 45		
Stationery Department	19 73		
Sundry persons	18 57		
		107 50	
Sundries		66 05	
Teaming, Martin Fay & Sons		35 00	
Telephone rent and tolls		289 73	
Use of pung, T. H. Brewer		10 00	
Washing, Fannie E. Blaisdell		39 84	
Total			$14,499 98
Balance unexpended			$ 02

INTEREST.

Appropriation			$144,344 00
RECEIVED.			
For accrued interest		$268 00	
Interest on deposits		2,501 20	
" " sewer assessments		36 84	
" " sidewalk assessments		83 98	
" " taxes		6,657 74	
		$9,547 76	
Amount carried forward			$144,344 00

Amount brought forward			$144,344 00
EXPENDED.			
For Interest on			
Daniel White Charity . . .		$300 00	
Dowse Institute Fund . . .		600 00	
Funded Loan		130,964 00	
Sanders Temperance Fund . .		600 00	
Temporary Loans		6,968 86	
Total			$139,432 86
Balance unexpended			$4,911 14

LAMP DEPARTMENT.

Appropriation			$72,000 00
RECEIVED.			
For old lanterns		$42 75	
EXPENDED.			
For salary of superintendent: —			
Charles F. Hopewell		1,000 00	
Horse board, Ralph Smith & Co. . .		300 00	
Horseshoeing: —			
Wm. Balmer	$14 00		
Street Department	5 70		
		19 70	
Lighting streets: —			
Cambridge Electric Light Co.: —			
Arc	$51,317 67		
Incandescent	10,972 10		
Town of Belmont	60 00		
Welsbach Street Lighting Company .	8,134 55		
		70,484 32	
Moving lamps and removing posts: —			
Cambridge Electric Light Company	$12 50		
Cambridge Gas Light Company .	52 70		
		65 20	
Stationery and printing: —			
Caustic & Claflin	$9 47		
Cotton & Gould	16 10		
Stationery Department . . .	8 03		
		33 60	
Amounts carried forward		$71,902 82	$72,000 00

Amounts brought forward		$71,902 82	$72,000 00
For Sundries		8 85	
Typewriter, W. M. Belcher & Co.		60 00	
Wagon repairs, Charles Waugh & Co.		8 75	
Total			$71,980 42
Balance unexpended			$19 58

LAND DAMAGES.

Appropriation			$16,044 53
EXPENDED.			
For Charles and Third Streets: —			
Land, Mary McSweeney		$100 00	
Harvard Square, land and damages: —			
Wm. Read, *et al.*		15,000 00	
Magee Street, land: —			
Nicholas F. Bechtel	$259 69		
Jacob L. Lockett, *et als.*	69 61		
Martha E. Whittemore	61 13		
		390 43	
Total			$15,490 43
Balance unexpended			$554 10

LAW DEPARTMENT.

Appropriation			$5,300 00
Additional appropriation			332 59
			$5,632 59
RECEIVED.			
For services of City Solicitor		$1,000 00	
EXPENDED.			
For salary of: —			
City Solicitor, G. A. A. Pevey		3,500 00	
Boxing cast and pattern, W. H. Norris		2 75	
Carriage hire: —			
Ralph Smith & Co.	$9 00		
Geo. F. Whiting & Co.	1 50		
		10 50	
Car tickets, Boston Elevated Railway Company,		100 00	
Amounts carried forward		$3,613 25	$5,632 59

Amounts brought forward		$3,613 25	$5,632 59
For Cash expended for sundries: —			
G. A. A. Pevey		713 64	
Copies of manuscripts: —			
Middlesex County		46 10	
Directory, Sampson, Murdock & Co.		5 00	
Furniture, Globe-Wernicke Company		9 50	
Photographs: —			
Fred. M. Ellis	$45 00		
Chas. R Leake, Jr.	12 00		
		57 00	
Recording deeds, E. O. Childs,		12 25	
Services: —			
N. F. Bechtel	$10 00		
Cunningham Bros.	25 00		
James Dunn	6 00		
Dennis Halloran	6 00		
Walter F. Hayward	3 50		
Geo. B. Henshaw, M. D.	15 00		
S. J. Kelley	15 00		
A. M. Stewart	75 00		
Geo. F. Stiles	10 20		
G. L. Walton, M. D.	35 00		
Walter C. Wardwell	9 49		
J. R. Worthen	5 00		
Bartholomew M. Young	3 24		
		218 43	
For stationery, printing and typewriter supplies: —			
T. H. Ball	$25 18		
Carter's Ink Company	9 00		
Geo. E. Crosby & Co.	39 00		
Jas. J. Shannon & Co.	6 10		
Stationery Department	35 32		
Sundry persons	6 48		
		121 08	
Stenography and typewriting: —			
Viola M. Bryant	$40 00		
Geo. B. French	710 35		
Arthur T. Lovell	75 00		
		825 35	
Subscription, Banker and Tradesman		5 00	
Typewriter repairs: —			
Jas. J. Shannon & Co.		5 75	
Total			$5,632 35
Balance unexpended			$ 24

OVERSEERS OF THE POOR (Almshouse Department).

Appropriation			$22,000 00
	RECEIVED.		
For Barrels		$27 70	
Board		703 17	
Grease and bones		67 45	
Old iron		6 55	
Rags		5 07	
Sundries		2 34	
Use of telephone		9 15	
Weighing fees		24 28	
		$845 71	
	EXPENDED.		
For salaries of : —			
Superintendent, M. L. Eldridge	$1,500 00		
Asst. Superintendent, Sam'l F. Norris	782 14		
Sundry house employees	4,746 28		
Organist, C. M. Walker	100 00		
		7,128 42	
Advertising :—			
Boston Herald Company	$10 38		
Cambridge Chronicle Company	6 06		
		16 44	
Board and care : —			
Cambridge Hospital	$10 00		
Carney Hospital	8 00		
Massachusetts General Hospital	10 25		
Chas. Hager	13 57		
Mary McKinnon	5 20		
		47 02	
Boots, shoes and repairs :—			
E. D. Eldridge	$1 25		
F. Fischer	5 15		
J. B. Lewis Company	96 00		
Wm. Myers	41 95		
Parker, Holmes & Co.	28 80		
J. P. Quinn	51 20		
Smith, Bennett & Co.	10 00		
A. G. Swett & Co.	69 15		
		303 50	
Burials, Horace D. Litchfield		71 65	
Burial fees, Cemetery Department		34 00	
Car tickets, Boston Elevated Railway Company		90 00	
Amounts carried forward		$7,691 03	$22,000 00

Amounts brought forward		$7,691 03	$22,000 00
For carriage and wagon repairs: —			
A. S. Lohnes & Co.		27 45	
Cash expended for sundries: —			
M. L. Eldridge		383 71	
Clothing, bedding and dry goods: —			
Brown, Durrell & Co. . . .	$474 00		
Burton, Mansfield & Pierce . .	56 00		
D. W. Hyde & Co.	4 48		
Jordan, Marsh & Co.	310 42		
T. H. Lane & Co. . . .	28 94		
Leopold Morse & Co.	44 40		
North, Fiske & Co. . . .	21 38		
G. W. Sammett & Son . .	4 50		
John O. Smith & Co.	256 75		
Smith, Sherman & Co. . .	72 60		
W. M. Townsend & Co. . . .	79 00		
		1,351 87	
Disinfectants: —			
India Alkali Works	$31 98		
F. W. Little	7 25		
Sundry persons	5 50		
		44 73	
Expressage: —			
Bancroft's Express	$30 93		
Boyle Express Company . . .	1 50		
		32 43	
Fuel: —			
Baker, Hunnewell Company . .	$130 00		
Dennis, Thompson, Pierce Company .	969 35		
Weighing, H. W. Brooks . .	12 25		
		1,111 60	
Furniture, furnishings and household supplies: —			
Allen, Thompson, Whitney Company,	$23 00		
G. W. Bent & Co.	5 25		
Dover Stamping Company . . .	15 40		
D. W. Gage	10 25		
Greenwood & Co.	36 22		
Holcomb & Hoke Manufacturing Co.	16 10		
D. W. Hyde & Co.	19 30		
Jordan, Marsh & Co	65 10		
John McVey	10 20		
Mitchell, Woodbury & Co. . . .	39 77		
J. L Mott Iron Works . . .	7 00		
John H. Pray, Sons & Co. . . .	63 87		
Prescott & Co.	13 84		
A. M. Robbins	1 50		
Smith, Patterson & Co. . . .	39 66		
Worcester Bros.	11 02		
		377 48	
Amounts carried forward		$11,020 30	$22,000 00

Amounts brought forward		$11,020 30	$22,000 00
For Gas, Cambridge Gas Light Co.		223 63	
Glass, Boston Plate & Window Glass Co.		27 78	
Hardware, tools, and supplies: —			
Burditt & Bynner	$165 66		
Dover Stamping Company	5 13		
D W. Gage	6 00		
F A. White	23 20		
A. J. Wilkinson & Co.	14 67		
Sundry persons	5 33		
		219 99	
House repairs: —			
Carpentry, W. H. Norris		126 08	
Heating apparatus repairs: —			
Wm. Campbell & Co.	$120 33		
Ingalls & Kendricken	454 65		
Walker & Pratt Manufacturing Co.	28 72		
Sundry persons	7 00		
		610 70	
Lighting apparatus repairs, Geo. F. Dickson		6 55	
Painting, papering, etc.: —			
J. J. Shedd	$53 15		
J. H. & J. P. Thayer & Co.	80 22		
		133 37	
Plastering, J. F. Brosnahan		77 70	
Plumbing: —			
John H. Stevens & Co.	$5 58		
W. H. Sweeney	456 13		
		461 71	
Repairing sink, Williams & Co.		18 80	
Ice chest: —			
Building ice chest, Thos. H. Connell	$114 99		
Lining ice chest, Higgins & Co.	60 15		
		175 14	
Ice, Cambridge Ice Company		67 50	
Labor: —			
Frank Henney	$28 50		
Michael Martin	90 02		
Alex. J. Musgrave	22 50		
Andrew Riley	36 00		
		177 02	
Lathyarn, M. F. Whiton & Co.		11 00	
Amounts carried forward		$13,357 27	$22,000 00

Amounts brought forward		$13,357 27	$22,000 00
For lumber, lime and cement: —			
Clark Brothers	$3 42		
Geo. W. Gale Lumber Company .	442 89		
		446 31	
Medicines and drugs: —			
J. Fuller & Co.	$10 00		
Elie H La Pierre	215 72		
J. A. Tupper	79 69		
		305 41	
Medical and surgical instruments: —			
W. H. Phelps	$16 00		
Sundry persons	8 00		
		24 00	
Nurse, Nellie E Frazier . . .		10 00	
Oils, paints, shellac, etc.: —			
W. A. Wood & Co.	$15 17		
Wood Brothers	138 20		
		153 37	
Pipe and fittings: —			
D. W. Lewis	$5 30		
Walworth Manufacturing Company .	48 81		
		54 11	
Professional attendance: —			
E A. Darling, M. D.	$6 00		
S. S. Orr, M. D.	4 00		
		10 00	
Repairing scale, The Fairbanks Co.		22 75	
Rubber goods, C S. Knowles . .		34 90	
Soap, Charles R. Teele		190 00	
Stationery: —			
Barry, Beale & Co.	$10 45		
Cotton & Gould	17 00		
		27 45	
Subsistence supplies: —			
Boston Packing and Provision Co. .	$30 31		
Boyd, Dalton & Co.	479 29		
Cambridge Baking Company . .	36 56		
Cheney, Upham & Co. . . .	9 75		
Geo. H. Chessman & Co. . . .	8 25		
George Close	23 45		
Cobb, Bates & Yerxa	378 09		
John Cummings	39 75		
Arthur W. Cutler & Co . . .	36 40		
Eastern Salt Company . . .	24 85		
R. S. Edwards & Co. . . .	463 95		
David Ellis & Co.	242 95		
N. F. Goldsmith & Co. . . .	36 30		
Amounts carried forward . .	$1,809 90	$14,635 57	$22,000 00

Amounts brought forward	$1,809 90	$14,635 57	$22,000 00
For subsistence supplies: —			
G. H. Hammond Company	119 00		
Chas. F. Hathaway	22 74		
J. A Hathaway & Co	1,899 60		
J. J. Hill	647 22		
J. A. Holmes & Co.	42 00		
Lyman L. Kimball	296 40		
Isaac Locke & Co.	12 20		
A. J. Lovell & Co.	101 08		
McPherson Brothers	148 68		
National Biscuit Company	42 69		
Fred D. Norton	384 90		
Oakdale Manufacturing Company	195 00		
Geo. G. Parker	32 28		
A. G. Patch & Co.	72 34		
F. Putnam & Co.	84 50		
Geo. E. Richardson & Co.	5 75		
Sands, Taylor, & Wood	155 00		
Fred'k C. Small & Co.	34 34		
Howard W. Spurr & Co.	163 63		
Swan, Newton & Co.	134 85		
L. A. Treat	29 48		
W. T. Warren	10 11		
David Whiting & Sons	687 65		
		7,131 34	
Subscriptions: —			
F. S. Hill	2 50		
Jas. W. Hunnewell	24 00		
		26 50	
Sundries		30 29	
Telephone rent and tolls		94 38	
Total			21,918 08
Balance unexpended			$81 92

OVERSEERS OF THE POOR (Farm Department).

Appropriation			$5,300 00
RECEIVED.			
For Farm produce		$6,011 60	
Stone		37 87	
		$6,049 47	
EXPENDED.			
For labor on farm: —			
Jas. Walsh, farmer	$782 50		
John Moynahan, market-man	390 00		
Employees	2,622 76		
		3,795 26	
Amounts carried forward		$3,795 26	$5,300 00

Amounts brought forward		$3,795 26	$5,300 00
For Cows, F. W. Trelegan		195 00	
Dust, Otis S. Brown & Co		1 75	
Glass, Boston Plate and Window Glass Company		6 00	
Hay and grain, Clark Bros.		189 62	
Labor, John Kenney		105 00	
Manure		601 96	
Packing, Rowe & Noll		4 05	
Pigs, Daniel L. Tappan		90 00	
Plants and seeds: —			
Jos. Breck & Sons	$16 43		
Penney Bros.	99 00		
W. W. Rawson	7 50		
Rowe & Noll	27 50		
Schlegel & Fottler	69 59		
		220 02	
Rent, Mercantile Wharf Corporation		40 00	
Tools, hardware and supplies: —			
Jos. Breck & Sons	$10 25		
Wood Bros.	2 00		
		12 25	
Total			5,260 91
Balance unexpended			$39 09

OVERSEERS OF THE POOR (House Offal Department).

Appropriation			$26,000 00
	RECEIVED.		
For sale of house offal		$6,997 40	
	EXPENDED.		
For labor, as per pay-rolls		$20,942 09	
Electrical hose, C. S. Knowles		7 50	
Hardware, Dodge, Haley & Co.		24 85	
Harness and repairs, Joseph A. Ryan		142 50	
Hay, grain, straw, etc.: —			
Clark Brothers	$761 71		
J. Cushing & Co.	739 75		
C. F. & G. W. Eddy	174 86		
Lord & Webster	122 47		
E. R. Luke & Co.	444 31		
L. G. Stone & Co.	15 75		
George G. Wright	560 84		
		2,819 69	
Amounts carried forward		$23,936 63	$26,000 00

Amounts brought forward		$23,936 63	$26,000 00
For Horses, Welch & Hall		300 00	
Horseshoeing: —			
William Bell	$101 30		
John McMahon & Co.	60 13		
Street Department	210 50		
		371 93	
Labor, Hugh Toomey		120 00	
Lumber: —			
John S. Clary	$72 42		
George W. Gale Lumber Company	315 12		
		387 54	
Paints, oils, etc, Wood Brothers		34 65	
Pine posts, A. A. Elston & Co.		18 00	
Pungs: —			
William Day	$25 00		
A. W. Ganong	100 00		
		125 00	
Sundries		8 82	
Wagon Repairs: —			
A. W. Ganong	$71 00		
A. S. Lohnes	585 08		
		656 08	
Total			25,958 65
Balance unexpended			$41 35

OVERSEERS OF THE POOR (Outside Aid Department).

Appropriation	$49,500 00
Transferred from Contingent Fund	750 00
	$50,250 00

RECEIVED.

For aid to, board and burial of sundry paupers	$5,730 49

EXPENDED.

For salaries of: —			
Secretary, D. P. Muzzey	$1,500 00		
Visitor, V. Danforth	730 63		
Agent, Harold K. Estabrook	750 00		
Driver, John Moynahan	392 50		
Clerk, Addie M. Benson	606 13		
Clerk, Viola M. Bryant	84 00		
		4,063 26	
Amounts carried forward		$4,063 26	$50,250 00

Amounts brought forward		$4,063 26	$50,250 00
For aid to sundry persons as per pay-rolls		2,910 10	
By Cities and Towns: —			
City of Beverly	$45 39		
Boston	2,809 38		
Brockton	30 00		
Chelsea	81 50		
Everett	54 62		
Fall River	10 65		
Haverhill	194 03		
Malden	119 70		
Medford	86 40		
Newton	49 19		
Somerville	765 80		
Waltham	81 83		
Worcester	127 22		
Town of Arlington . . .	75 24		
Athol	108 00		
Belmont	142 73		
Brookline	188 42		
Cottage City . . .	6 63		
Danvers	195 00		
Hudson	77 52		
Hyde Park . . .	14 10		
Norwood	197 87		
Peabody	120 00		
Randolph . . .	34 00		
Raynham	181 94		
Revere	6 00		
Rockland	139 25		
Watertown . . .	5 75		
		5,948 16	
Ambulance fees: —			
Chas. W. Dailey	$5 00		
Police Department . . .	102 00		
		107 00	
Binding and lettering: —			
E. W. Bettinson	$6 00		
J. H. H. McNamee . . .	65 40		
		71 40	
Board and care at: —			
Boston Children's Aid Society . .	$1,096 08		
Cambridge Hospital	41 42		
Carney Hospital	316 00		
Children's Hospital . .	73 00		
Clarke School for the Deaf . .	22 09		
Mrs. Albert C. Crane . . .	141 60		
Danvers Insane Hospital . . .	1,228 51		
Mrs. Mary Gillpatrick . . .	29 42		
Amounts carried forward . .	$2,948 12	$13,099 92	$50,250 00

Amounts brought forward . . .	$2,948 12	$13,099 92	$50,250 00
For board and care at: —			
Hospital Cottages for Children . .	303 62		
Massachusetts General Hospital .	64 00		
Mass. Hospital for Dipsomaniacs .	704 23		
Massachusetts Hospital for Epileptics	917 90		
Mass. School for Feeble-minded .	1,765 40		
Medfield Insane Asylum	5,665 22		
Northampton Insane Hospital . .	169 46		
Mrs. Moses Pepper's	51 14		
Thos. F. Smith's	169 46		
Mrs. George H. Sweet's . . .	169 46		
Westboro' Insane Hospital . .	2,467 95		
Worcester Insane Asylum . . .	2,210 46		
Worcester Insane Hospital . .	8,811 47		
		26,417 89	
By Commonwealth of Massachusetts: —			
At Danvers Insane Hospital . .	$88 22		
Hospital for Dipsomaniacs . .	373 76		
School for Feeble-Minded . . .	119 32		
State Almshouse	2,022 71		
State Farm	840 00		
Taunton Insane Hospital . . .	34 82		
Worcester Insane Hospital . .	1,160 73		
		4,639 56	
Boots and shoes: —			
Leighton Bros. & Co. . . .	$15 50		
W. T. Roop & Co.	18 75		
		34 25	
Burials, H. D. Litchfield . . .		178 13	
Burial fees, Cemetery Department .		151 00	
Carpentry, W. H. Norris . . .		160 07	
Carriage hire: —			
M. J. Fairbanks	$47 50		
Ralph Smith & Co.	23 50		
		71 00	
Car tickets: —			
Boston Elevated Railway Co. . .	$300 00		
Boston & Maine Railroad Co. . .	34 50		
		334 50	
Cash expended for travelling expenses: —			
V. Danforth	$7 82		
H. K. Estabrook	18 75		
		26 57	
Directories: —			
W. A. Greenough & Co.	$32 50		
Henry M. Meek	13 00		
Sampson, Murdock & Co. .	5 00		
		50 50	
Amounts carried forward		$45,163 39	$50,250 00

Amounts brought forward		$45,163 39	$50,250 00
For fuel: —			
Baker-Hunnewell Company . .	$6 50		
Coleman Bros.	20 60		
Dennis, Thompson, Pierce Company	1,247 50		
Weighing, H. W. Brooks . . .	12 50		
		1,287 10	
Furniture and repairs: —			
Phillips Bros. & Co.		6 00	
Ice, Fresh Pond Ice Company . .		20 85	
Lighting: —			
Cambridge Electric Light Company .	$12 86		
Cambridge Gas Light Company .	29 66		
		42 52	
Medicines, drugs, etc.: —			
G. D. Brown & Co.	$7 92		
C. E. Coombs	6 08		
E. C. Gove	26 00		
Elie H. La Pierre	223 53		
Arthur D. Reycroft	10 44		
L. W. Reycroft	30 42		
W. C. Reycroft	7 38		
Reeves Bros.	11 25		
Frank H. Willard	8 24		
		331 26	
Medical instruments and surgical apparatus: —			
L. H. Buzzell	$9 32		
J. Frank Gear	22 50		
W. H. Phelps & Co.	11 00		
		42 82	
Microscope, Harvard Co-operative Society		104 50	
Nurses, Mrs. David Hogan . . .		15 00	
Paper bags, etc., Wm. H. Claflin & Co.		19 14	
Professional services: —			
S. S. Orr, M. D.	$139 00		
E. H. Stevens, M D. . . .	10 00		
R. Wetherbee, M. D. . . .	28 00		
		177 00	
Refund of money paid for board at Worcester Insane Hospital: —			
Eugene A. Bailey		27 86	
Shellacing and painting: —			
George H. Hughes		33 15	
Soap, Charles R. Teele		25 00	
Amounts carried forward		$47,295 59	$50,250 00

Amounts brought forward		$47,295 59	$50,250 00
For stationery and printing: —			
F. W. Barry, Beale & Co.	$39 80		
Caustic & Claflin	93 10		
Cotton & Gould	40 01		
John H. Ford	169 62		
Library Bureau	7 00		
		349 53	
Stamps, T. S. Buck		6 20	
Stretcher, etc.: —			
Warren H. Dow		10 00	
Subsistence supplies: —			
Theodore E. Blake	$516 00		
Clark Brothers	21 90		
Daniel H. Dean	139 00		
R. S. Edwards & Co.	316 42		
J. A Holmes & Co.	621 35		
Sands, Taylor & Wood	327 50		
Frederick C. Small & Co.	154 18		
		2,096 35	
Sundries		85 22	
Telephone rent and tolls		182 08	
Transportation, State Board of Charity		107 69	
Wagon repairs, A. S. Lohnes & Co.		74 85	
Total			$50,207 51
Balance unexpended			$42 49

SALARY OF CITY PHYSICIAN.

Appropriation		$1,500 00
EXPENDED.		
For salary of City Physician, Dr L. L. Bryant	$1,500 00	
Total		$1,500 00

PARK DEPARTMENT (Construction).

Appropriation		$27,583 18
Additional appropriation		100,000 00
Revenue appropriated		5,437 33
		$133,020 51
RECEIVED.		
For filling	$1,654 50	
Land damages	3,782 83	
Amounts carried forward	$5,437 33	$133,020 51

Amounts brought forward . . .		$5,437 33	$133,020 51
For plants and seed		9 00	
Rent		1,957 20	
Sundries		2 90	
		$7,406 43	
	EXPENDED		
For Cambridge Field: —			
Tools, Jos. Breck & Sons . . .		$128 25	
Total expenses Cambridge Field . .		$128 25	
East Cambridge Embankment: —			
Filling, John T Scully . . .		$221 10	
Hardware, Burditt & Bynner . .		25	
Pay-rolls: —			
Laborers	$99 00		
Engineers	103 88		
		202 88	
Stakes, John Quin		1 14	
Total expenses, East Cambridge Embankment		$425 37	
General account: —			
Salary of General Supt. of Parks: —			
Howard E. Whiting . . .		$1,675 00	
Badges and buttons: —			
Raphael Masstrangialo . . .		27 90	
Binding, Riverside Bindery . .		22 00	
Brooms, N. E. Broom Co. . . .		7 50	
Bicycles and repairs: —			
Linwood Mfg. Company . .	$45 00		
J. L. Moseley	19 70		
		64 70	
Carpentry, W. Fillmore & Co. . .		52 31	
Car tickets: —			
Boston Elevated Railway Company		200 00	
Carriage hire, Geo. F. Whiting & Co.		16 00	
Cart, Chas. Waugh & Co. . . .		350 00	
Engraved plates: —			
Heliotype Printing Company . .		102 50	
Amounts carried forward		$2,517 91	$133,020 51

Amounts brought forward . . .		$2,517 91	$133,020 51
For hardware, tools and repairs, and supplies: —			
Jos Breck & Sons	$130 41		
Burditt & Bynner	10 54		
Ralph P. Hoagland	33 25		
J. D. Jewett & Co.	23 75		
James Maitland	29 68		
Daniel P. Sullivan	7 80		
Sundry persons	8 35		
		243 78	
Horse board, G. F. Whiting & Co. .		300 00	
Horseshoeing: —			
W. F. Garrett	$4 50		
G. W. Lowd	9 00		
Street Department	13 50		
		27 00	
Landscape architects, Olmsted Bros. .		630 20	
Pay-rolls: —			
Laborers	$122 33		
Engineers	12 23		
		134 56	
Photograph supplies: —			
D. W. Butterfield	$5 00		
Horgan, Robey & Co. . . .	1 25		
Chas. R. Leake, Jr.	3 93		
		10 18	
Rent, The Prospect Union . . .		100 00	
Rubber Boots, W. T. Roop & Co . .		24 50	
Sign boards, C S. Newcomb . .		55 00	
Stakes, John Quin		62 34	
Stationery and printing: —			
Cambridge Chronicle Company . .	$181 47		
Frost & Adams Co.	14 00		
Sundry persons	4 90		
		200 37	
Sundries		23 35	
Use of horse and buggy, G. F. Whiting & Co.		6 75	
Wagon repairs, F. Ivers & Son . .		10 50	
Total expenses, General Account . .		$4,346 44	
The Nursery: —			
Fuel, Coleman Bros.		$4 50	
Pay-roll, laborers		761 24	
Pipe, Brock Bros.		5 00	
Sundries		2 91	
Amounts carried forward . .		$773 65	$133,020 51

Amounts brought forward . . .		$773 65	$133,020 51
For trees and shrubs: —			
Water Works Department . .	$14 65		
W. H. Wyman	125 00		
		139 65	
Total expenses, The Nursery . .		$913 30	
Office expenses: —			
Salaries of clerks: —			
Grace E. Hixon	$626 00		
Jessie Wilde	24 00		
John R. Wilson	390 00		
		$1,040 00	
Cabinet, T. Robinson		46 50	
Carpentry, C. S. Newcomb . . .		5 87	
Rent and tolls, New England Telephone Company		126 25	
Stationery, printing, and typewriter supplies: —			
Cambridge Chronicle Co. . . .	$63 00		
Cotton & Gould	66 55		
Stationery Department . . .	50 46		
Sundry persons	8 75		
		188 76	
Sundries		3 75	
Total office expenses		$1,411 13	
For Rindge Field: —			
Filling, loam and gravel: —			
Sundry persons		$46 80	
Lamp ornaments: —			
Barbour, Stockwell Company .		17 00	
Pay-rolls: —			
Laborers	$27 67		
Engineers	30 62		
		58 29	
Signs, C. H. Buck & Co. . . .		8 00	
Teaming, sundry persons . . .		2 25	
Water supply, Water Works . .		3 30	
Total expenses Rindge Field . . .		$135 64	
River Parkway, Section A: —			
Advertising and printing: —			
Cambridge Chronicle Company .		$ 26	
Amounts carried forward . .		$ 26	$133,020 51

Amounts brought forward		$ 26	$133,020 51
River Parkway, Section A : —			
Carpentry, W. Fillmore & Co. . .		16 75	
Examining titles, Wm. V. Thompson,		325 00	
Filling : —			
N. E. Dredging Co., . . .	$23,466 14		
Sundry persons	1,732 79		
		25,198 93	
Labor on posts : —			
Barbour, Stockwell Company .		8 50	
Lumber, E. D. Sawyer & Co. . .		19 45	
Pay-rolls : —			
Laborers	$3,140 53		
Engineers	594 93		
		3,735 46	
Signs, C. H. Buck & Co. . . .		5 50	
Stakes, John Quin		23 50	
Teaming, sundry persons . . .		545 58	
Use of roller, M. O'Sullivan . .		9 00	
Water supply, Water Works . .		142 88	
Total expenses, Section A		$30,030 81	
For River Parkway, Section B : —			
Advertising : —			
Cambridge Chronicle Company .		$ 83	
Bricks, M. W. Sands		107 03	
Cash expended for sundries : —			
H. E. Whiting		6 02	
Filling, loam and gravel : —			
Sundry persons		10,844 51	
Freight, Fitchburg Railroad Company		11 20	
Grass seed, Jos. Breck & Sons . .		40 60	
Grate, Concord Foundry Company .		234 00	
Hardware, tools and supplies : —			
Jos. Breck & Sons	$100 88		
Burditt & Bynner	34 05		
Ford & Saunders	1 50		
		136 43	
Hose, etc. : —			
Boston Woven Hose Company .		9 50	
Labor on posts : —			
Barbour, Stockwell & Co. . .		8 50	
Lawn grass, R. & J. Farquhar & Co.		57 00	
Lettering sign, C. H. Buck & Co. .		5 50	
Amounts carried forward		$11,461 12	$133,020 51

Amounts brought forward . . .		$11,461 12	$133,020 51
For Lumber: —			
Geo. W. Gale Lumber Company .	121 73		
E. D. Sawyer & Co.	75 67		
		197 40	
Pay-rolls:—			
Laborers	$7,405 84		
Engineers	490 78		
		7,896 62	
Pipe and cement:—			
D. W. Lewis	$84 57		
Portland Stone Ware Company .	287 32		
		371 89	
Poles, W. H. Wyman		39 00	
Printing, :—			
Cambridge Chronicle Company .		6 40	
Stakes, John Quin		37 00	
Stone work, Austin Ford & Son . .		13 50	
Teaming, Sundry persons . . .		2,286 91	
Trees and shrubs: —			
Shady Hill Nursery	$440 94		
T. C. Thurlow	240 00		
W. H. Wyman	139 67		
		820 61	
Use of steam roller: —			
Town of Arlington		218 75	
Water supply: —			
Water Works Department . .		403 88	
Total expenses, Section B . . .		$23,753 08	
River Parkway, Section C: —			
Blue prints, Chas. E. Moss . . .		$1 63	
Land and damage: —			
Dalrymple & Lennon . . .		3,226 83	
Pay-rolls: —			
Laborers	$19 00		
Engineers	159 63		
		178 63	
Recording deeds, E. O. Childs . .		10 20	
Total expenses, Section C . . .		$3,417 29	
River Parkway, Section D: —			
Advertising: —			
W. T. Billings	$2 00		
Cambridge Chronicle Company .	18 43		
		$20 43	
Amounts carried forward		$20 43	$133,020 51

Amounts brought forward . . .		$20 43	$133,020 51
For River Parkway, Section D :—			
Artificial stone floor, Simpson Bros.		12 00	
Awnings, I W. Wheeler & Co. . .		11 52	
Building dyke, Nawn & Brock . .		2,298 63	
Carpentry : —			
W. Fillmore & Co.	$1,286 12		
W. H. Norris	3 58		
		1,289 70	
Dredging, Bay State Dredging Co. .		705 00	
Expressage : —			
George Dorr	$4 00		
Hatch & Co.	1 85		
		5 85	
Filling, sundry persons . . .		14,173 49	
Fuel, Coleman Bros.		1 35	
Furniture : —			
Geo. S. Perry & Co.	$42 40		
Sundry persons	3 25		
		45 65	
Gravel : —			
Frederic D. Fisk	$442 05		
N. E. Dredging Company . . .	300 00		
		742 05	
Hardware, tools and supplies : —			
Burditt & Bynner	$51 17		
L. W. Ferdinand & Co. . . .	82 67		
J. D. Jewett & Co.	108 80		
Sundry persons	2 17		
		244 81	
Lumber : —			
Chas. E. Dearborn	$1 36		
E. D. Sawyer & Co.	11 37		
		12 73	
Mason work, John B. Byrne . .		443 30	
Moving voting booths : —			
H. S. Angus & Son		60 00	
Pay-rolls : —			
Laborers	$5,693 11		
Engineers	1,398 64		
		7,091 75	
Prints, Chas. E. Moss		3 40	
Putting in shower at Magazine Street bath, Levi Hawkes		24 00	
Removing sea-wall, John T. Scully .		100 00	
Signs and numbers, C. H. Buck & Co.		29 29	
Stakes, John Quin		51 34	
Teaming, sundry persons . . .		1,252 90	
Water supply : —			
Water Works department . . .		26 41	
Total expenses, Section D . . .		$28,645 60	
Amount carried forward			$133,020 51

Amount brought forward			$133,020 51
River Parkway, Section F: —			
Edgestone and gutter stone: —			
H. Gore & Co.		$19 53	
Filling, loam and gravel: —			
Sundry persons		84 29	
Lighting: —			
Welsbach Street Lighting Company		64 68	
Painting fence, A. Simpson . . .		5 20	
Pay-rolls: —			
Laborers	$1 00		
Engineers	127 51		
		128 51	
Water supply: —			
Water Works department . . .		6 00	
Total expenses, Section F. . . .		$308 21	
River Parkway, Section G: —			
Edgestone and gutter stone: —			
H. Gore & Co.	$50 82		
Chas. McMahon	6 32		
		$57 14	
Examining title, Wm. V. Thompson .		15 00	
Filling, loam and gravel: —			
Sundry persons		376 25	
Land and damages: —			
Cambridge Gas Light Company .	$1,750 00		
Annie Coleman	311 54		
Ellen O'Hara	2,800 00		
		4,861 54	
Lighting, Welsbach Street Light Co.		998 43	
Lumber, E. D. Sawyer & Co. . .		13 87	
Pay-rolls: —			
Laborers	$4,023 41		
Engineers	393 03		
		4,416 44	
Prints, Chas. E. Moss . . .		14 62	
Recording deeds, E O. Childs . .		10 75	
Sundries		13 46	
Tax title, J. J. Myers . . .		46 45	
Teaming, sundry persons . . .		586 53	
Tools and repairs, James Maitland .		37 29	
Trees and shrubs, T. R. Watson .		35 94	
Total expenses, Section G . . .		$11,483 71	
Amount carried forward . .			$133,020 51

Amount brought forward			$133,020 51
For Washington Elm: —			
Granite curb, Sweatt & Gould		$252 01	
Hardware, tools and supplies, Brock Brothers		1 99	
Loam, Jas. Gray		27 00	
Pay-rolls: —			
Laborers	$110 60		
Engineers	16 88		
		127 48	
Teaming, sundry persons		31 50	
Total expenses, Washington Elm		$439 98	

SUMMARY: EXPENDED.

For Cambridge Field	$128 25	
East Cambridge Embankment	425 37	
General Account	4,346 44	
The Nursery	913 30	
Office Expenses	1,411 13	
Rindge Field	135 64	
River Parkway, Section A	30,030 81	
" " " B	23,753 08	
" " " C	3,417 29	
" " " D	28,645 60	
" " " F	308 21	
" " " G	11,483 71	
Washington Elm	439 98	
Total		$105,438 81
Balance unexpended		$27,581 70

PARK DEPARTMENT (Maintenance).

Appropriation			$13,500 00
Transferred from Street Department, Portland and Prospect Sts.			998 60
			$14,498 60

RECEIVED.

For labor, etc.	$21 60	

EXPENDED.

For Cambridge Field: —			
Awning, Irving W. Wheeler & Co.		$17 11	
Clothing, Oak Hall Clothing Co.		24 50	
Ensigns, Irving W. Wheeler & Co.		11 60	
Hardware, tools and supplies: —			
Burditt & Bynner	$12 81		
John P. Lovell Arms Co.	28 00		
		40 81	
Amounts carried forward		$94 02	$14,498 60

Amounts brought forward		$94 02	$14,498 60
For Cambridge Field:—			
Hose, Boston Woven Hose and Rubber Co.		13 25	
Pay-roll:—			
Laborers	$2,757 89		
Engineers	6 00		
		2,763 89	
Repairing fountain, Levi Hawkes		21 12	
Repairing canopy, Daniel D. Donovan		18 50	
Sand, Ham & Carter		26 24	
Stakes, John Quin		74 25	
Sundries		15 47	
Teaming, sundry persons		23 25	
Varnish, Ralph P. Hoagland		30 00	
Water supply, Water Works		10 37	
Total expenses, Cambridge Field		$3,090 36	
For Cambridge Field Shelter:—			
Superintendent, Frederick Gustinger	$858 00		
Janitor, G. J. Weber	715 58		
Matron, Mrs. E. Reardon	521 67		
		$2,095 25	
Brushes, G. H. Worcester & Co.		16 50	
Carpentry, etc, W. Fillmore & Co.		5 19	
Clock, Nelson H. Brown		35 00	
Clothing, Oak Hall Clothing Co.		37 75	
Fuel, Dennis, Thompson, Pierce Co.		95 50	
Hardware, tools and supplies:—			
Burditt & Bynner	$61 03		
Wm. H. Claflin & Co.	18 00		
Jordan, Marsh & Co.	8 75		
		87 78	
Laundry work, E. & R. Laundry		24 09	
Lighting, Cambridge Electric Light Company		50 12	
Plumbing, Isaac N. Tucker		42 00	
Sundries		17 93	
Telephone rent and tolls		108 54	
Total expenses, Cambridge Field Shelter		$2,615 65	
For Commons and Squares:—			
Ensigns, Irving W. Wheeler & Co.		$34 80	
Hardware, tools and supplies:—			
Ames Plow Company	$9 62		
Burditt & Bynner	19 80		
		29 42	
Filling, Sundry persons		39 00	
Lumber, E. D. Sawyer & Co.		127 30	
Amounts carried forward		$230 52	$14,498 60

Amounts brought forward		$230 52	$14,498 60
Commons and Squares: —			
Pay-rolls: —			
Laborers	$2,339 96		
Engineers	15 86		
		2,355 82	
Repairing flags, Fannie E. Blaisdell		9 50	
Rubbish barrels, Joseph Breck & Sons		21 00	
Sundries		4 62	
Teaming: —			
Mortimer Downey	$45 75		
Thomas O'Hara	57 75		
		103 50	
Work on flag-staffs, David Cass		41 99	
Water supply, Water Works		9 44	
Total expenses, Commons and Squares		$2,776 39	
For General Account: —			
Bicycle repairs, J. L. Moseley		$11 65	
Board of horse and storage, Street Department		260 00	
Hardware, tools and repairs: —			
Joseph Breck & Sons	$62 20		
Burditt & Bynner	12 75		
		74 95	
Harness repairs, Hugh McCaffrey		20 25	
Horseshoeing, G. W. Lowd	$9 50		
Street department	7 00		
		16 50	
Sundries		5 10	
Wagon repairs, Chas. Waugh & Co.		50 00	
Total expenses for General Account		$438 45	
For Public Grounds: —			
Filling, sundry persons		$47 40	
Hose, Burditt & Bynner		6 00	
Manure, Thos. O'Hara		50 55	
Pay-rolls: —			
Laborers	$695 73		
Engineers	32 74		
		728 47	
Plants: —			
Joseph Breck & Sons	$53 60		
P. O'Brien & Son	65 00		
		118 60	
Sundries		5 56	
Total expenses for Public Grounds		$956 58	
For Shade Trees: —			
Hardware, tools and supplies: —			
Joseph Breck & Sons	$310 70		
Amounts carried forward	$310 70		$14,498 60

Amounts brought forward . . .	$310 70		$14,498 60
For shade trees: —			
Hardware, tools and supplies: —			
Burditt & Bynner	37 17		
Clinton Wire Cloth Company . .	27 00		
F. A. White	5 78		
		$380 65	
Hose, Ford & Saunders		5 25	
Lumber, E. D. Sawyer & Co. . .		5 90	
Pay-rolls: —			
Laborers	$3,887 79		
Engineers	44 11		
		3,931 90	
Poles, Coleman Brothers . . .		30 00	
Repairing tools, Daniel J. Sullivan .		9 20	
Sundries		19 42	
Teaming		237 26	
Total expenses for Shade Trees . .		$4,619 58	

SUMMARY: EXPENDED.

For Cambridge Field	$3,090 36	
Cambridge Field Shelter	2,615 65	
Commons and Squares	2,776 39	
General Account	438 45	
Public Grounds	956 58	
Shade Trees	4,619 58	
Total		$14,497 01
Balance unexpended		$1 59

PARK DEPARTMENT (Maintenance, Interest).

Appropriation		$39,280 00
RECEIVED.		
For accrued interest	$126 39	
EXPENDED.		
For funded loan	$38,880 00	
Total		$38,880 00
Balance unexpended		$400 00

PARK DEPARTMENT (Sinking Funds).

Appropriation		$16,250 00
EXPENDED.		
For amount required by city ordinance for payment of park debt	$16,250 00	
Total		$16,250 00

PLUMBERS EXAMINER'S DEPARTMENT.

Appropriation		$100 00
RECEIVED.		
For licenses	$28 50	
EXPENDED.		
For clerical services, H. M. Griffin	$15 00	
Examinations, John Crawford	83 75	
Total		98 75
Balance unexpended		$1 25

POLICE DEPARTMENT.

Appropriation			$117,000 00
RECEIVED.			
For Ambulance fees		$81 00	
Cloth		688 77	
Fines: —			
J. R. Fairbairn, House of Correction	$1,174 00		
E. W. Law, Third District Court	3,937 84		
		5,111 84	
Old material		3 35	
		$5,884 96	
EXPENDED.			
For salaries of: —			
Chief, L. J. Cloyes	$1,800 00		
Deputy Chief, W. F. Batchelder	1,500 00		
Captains: —			
M. J. Folsom	1,400 00		
J. F. Murray	1,400 00		
F. B. Pullen	1,400 00		
Inspector, J. E. Murray	1,400 00		
Lieutenant, Henry C. Jones	1,200 85		
Sergeants	7,683 00		
Patrolmen	88,006 87		
Drivers	4,953 88		
Matrons	730 00		
		$111,474 60	
Buttons, D. Evans & Co.		50 00	
Camera stand, Benj. French & Co.		5 00	
Amounts carried forward		$111,529 60	$117,000 00

Amounts brought forward		$111,529 60	$117,000 00
Car tickets, Boston Elevated Railway Company		250 00	
Cash expended for sundries: —			
M. J. Folsom	$11 10		
J. E. Murray	45 00		
J. F. Murray	12 01		
P. F. Murray	6 50		
F. B. Pullen	13 28		
		87 89	
Chevrons, Raphael Masstrangialo		10 75	
Cleaning stations: —			
Julia Delaney	$14 10		
Mary McEachern	96 00		
Anna Wright	120 00		
		230 10	
Cloth for uniforms, Wendell, Fay, & Co.		576 27	
Directories: —			
W. A Greenough & Co	$24 00		
Sampson, Murdock, & Co.	5 00		
		29 00	
For Disinfectants: —			
R. S. Downe	$5 00		
Puritan Germicide Co.	22 50		
Read Holliday & Sons	5 00		
		32 50	
Dues, Gas Consumers' Association		33 00	
Expressage, Savage & Son		9 32	
Fire-arms and repairs: —			
Iver Johnson Sporting Goods Co.	$21 00		
Wm. Read & Sons	20 83		
		41 83	
Fuel, Dennis, Thompson, Pierce Co.		245 46	
Furniture, furnishings and repairs: —			
The Globe Co.	$10 50		
James Grant	43 24		
D. W. Hyde & Co.	11 50		
Phillips, Bros. & Co.	67 55		
		132 79	
Hardware, tools and supplies: —			
Burditt & Bynner	$59 52		
J. C. Moore & Co.	15 10		
J. H. Wyeth & Co.	5 76		
		80 38	
Amounts carried forward		$113,288 89	$117,000 00

Amounts brought forward		$113,288 89	$117,000 00
Harness and repairs, and horse clothing: —			
Chas. E. Berry	$11 75		
Owen Doherty	6 10		
Wm. H. Roberts	6 85		
		24 70	
Hay, grain and straw: —			
J. S Bradeen	$90 93		
J. Cushing & Co.	51 09		
A. G. Dore & Co.	62 90		
		204 92	
Heating buildings: —			
P. P. City buildings		890 00	
Horse board, Geo. F. Whiting & Co.		300 00	
Horse clipping, Ralph Smith & Co.		5 00	
Horseshoeing: —			
Wm. Balmer	$12 50		
P. J. Callahan	8 00		
Wm. Ferguson	21 50		
Thos. Smith	6 50		
Street Department	54 25		
		102 75	
House repairs: —			
Carpentry, W. H. Norris		54 39	
Planing and moulding, P. R. Rideout		6 90	
Painting and glazing, George H. Hughes		73 35	
Plumbing, Henry T. Moulton		12 74	
Repairing lighting apparatus: —			
John J. Long		6 50	
Ice: —			
Boston Ice Company	$12 00		
Fresh Pond Ice Company	24 70		
		36 70	
Laundry work: —			
Warren H. Dow	$20 95		
Mary Flynn	5 70		
		26 65	
Lights: —			
Cambridge Electric Light Company	$149 44		
Cambridge Gas Light Company	630 24		
		779 68	
Photographs, Fred M. Ellis		63 83	
Repairs on bicycles, J. L. Moseley		6 70	
Stationery, printing and typewriting supplies: —			
Caustic & Claflin	$142 29		
Cotton & Gould	117 00		
Stationery department	72 45		
		331 74	
Straps, Raphael Masstrangialo		8 50	
Amounts carried forward		$116,223 94	$117,000 00

Amounts brought forward	$116,223 94	$117,000 00
Sundries	102 93	
Telephone rent and tolls	469 28	
Typewriter repairs: —		
W. M. Belcher & Co.	11 60	
Wagon and carriage repairs: —		
Chas Waugh & Co.	190 60	
Total		$116,998 35
Balance unexpended		$1 65

PUBLIC LIBRARY.

Appropriation			$20,000 00
RECEIVED.			
For Dog licenses, 1898		$4,031 99	
Fines and catalogues		595 71	
		$4,627 70	
EXPENDED.			
For Salaries: —			
Librarian, Wm. L. R. Gifford	$2,499 99		
Assistants	5,167 89		
Janitor, T. M. Thomas	1,173 21		
Janitor's substitute	20 00		
		8,861 09	
Baskets, Hopkinson & Holden		7 50	
Bindings: —			
E. W. Bettison	$29 34		
Boston Bookbinding Company	24 95		
David Farquhar	411 84		
J. H. H. McNamee	937 92		
		1,404 05	
Books, periodicals, etc.: —			
Amee Bros.	$561 06		
Balch Bros.	9 00		
Boston Book Company	15 85		
T. H. Castor & Co.	214 20		
Cambridge Social Union	8 20		
John W. Cadby	5 91		
Desmond Publishing Company	8 00		
Essex Institute	5 00		
The Helman-Taylor Company	5 00		
Bruno Hessling	12 00		
The International Society	6 00		
Ferd. P. Kaiser	14 00		
Chas. E. Lauriat Company	52 70		
Little, Brown & Co.	3,512 49		
George E. Littlefield	218 78		
Amounts carried forward	$4,648 19	$10,272 64	$20,000 00

Amounts brought forward . . .	$4,648 19	$10,272 64	$20 000 00
Books, periodicals, etc.:—			
Macmillan Company	5 00		
Massachusetts Historical Society .	10 00		
G. P. Putnam's Sons	5 00		
Chas. Scribner's Sons	6 00		
		4,674 19	
Car tickets, Boston Elevated Railway Company		20 00	
Cash for sundries, W. L. R. Gifford .		14 15	
Delivery of books and agencies:—			
Wm. B. Cade	$448 49		
M. I. Dow	50 00		
E. C. Gove	50 00		
H. F. Grant	17 50		
Jas. W. Hunnewell	100 00		
Carrie E. Phillips	50 00		
Prospect Union	60 00		
W. T. Ralph	93 62		
P. A. Yerxa	17 50		
Michael Whalen	60 00		
		947 11	
Directories:—			
W. A. Greenough & Co. . . .	$11 50		
Sampson, Murdock & Co. . . .	5 00		
		16 50	
Expressage, Sawin's Express . . .		39 74	
Fuel, Dennis, Thompson, Pierce Co. .		439 69	
Furniture and furnishings:—			
Robert Josselyn	$18 65		
Paine Furniture Company . . .	50 22		
Worcester Bros.	9 00		
		77 87	
Furniture repairs, F. M. Eaton . .		5 20	
Hardware and supplies:—			
Brock & Eaton	$41 84		
Somerville Brush and Mop Company	2 35		
		44 19	
House Repairs:—			
Carpentry:—			
John Quin	$23 82		
M. F. Tracy & Son	50 50		
		74 32	
Electric work, F. Bryant & Co. . .		35 00	
Plumbing, H. L. Rose		6 45	
Ice, Fresh Pond Ice Company . . .		17 60	
Insurance, R. B. Walker		432 00	
Lighting:—			
Cambridge Electric Light Company .	$600 92		
Cambridge Gas Light Company . .	355 46		
		956 38	
Amounts carried forward		$18,073 03	$20,000 00

Amounts brought forward		$18,073 03	$20,000 00
Lighting apparatus: —			
Brock & Eaton	$32 07		
Dwight T. Cortis	72 30		
		104 37	
Soaposo, Standard Chemical Company		9 00	
Stationery, printing and typewriting supplies: —			
Amee Bros.	$16 43		
Caustic & Claflin	16 15		
Co-operative Press	620 25		
Oliver B. Graves	387 10		
Hammond Typewriter Company	9 36		
Hooper, Lewis & Co.	34 10		
Library Bureau	61 80		
Stationery department	24 00		
Edward W. Wheeler	227 45		
		1,396 64	
Sundries		64 95	
Typewriter repairs, Hammond Typewriter Company		9 35	
Telephone rent and tolls		87 88	
Washing towels, T. M. Thomas		12 66	
Varnishing, etc., J. L. P. Ackers		240 62	
Total			$19,998 50
Balance unexpended			$1 50

PUBLIC LIBRARY. — (East Cambridge.)

Appropriation			$1,230 00
EXPENDED.			
For salaries of			
Superintendent, John J. Henderson	$600 00		
Assistant, C. S. Marsh	156 50		
Substitute, Jeremiah J. Boyle	22 50		
		779 00	
Binding: —			
Boston Bookbinding Company	$13 75		
David Farquhar	17 76		
		31 51	
Books and periodicals: —			
Amee Brothers	$100 30		
Little, Brown, & Co.	73 40		
		173 70	
Furniture, Paine Furniture Company		8 50	
Lighting, Cambridge Gas Light Co.		23 36	
Amounts carried forward		$1,016 07	$1,230 00

Amounts brought forward	$1,016 07	$1,230 00
Rent, Robinson Estate	200 00	
Sundries	10 10	
Total		$1,226 17
Balance unexpended		$3 83

PUBLIC PROPERTY, CITY BUILDINGS, CARE AND REPAIR.

Appropriation		$22,800 00
Transferred from Contingent Fund		400 00
		$23,200 00
Transferred to School Houses, Care and Repair		4,500 00
		$18,700 00

RECEIVED.

For heating buildings: —		
Fire Department	$375 00	
Inspection of wires	100 00	
Police Department	890 00	
	$1,365 00	
Old iron and junk	79 02	
Rent, Old Bridge School House	45 00	
Rent of land: —		
Wm. Hanlon	$145 81	
Jas. S. McMahon	52 00	
	197 81	
	$1,686 83	

EXPENDED.

For salaries of janitors	$10,538 43	
Dues, Gas Consumers' Association	48 00	
Fuel: —		
Dennis, Thompson, Pierce Company	$2,152 47	
P. F Gayton	20 90	
Weighing, H. W. Brooks	34 90	
	2,208 27	
Inspection of boilers: —		
Everett B. Dyer, State Boiler Inspector	16 00	
Lights: —		
Cambridge Electric Light Co.	$1,290 68	
Cambridge Gas Light Co.	539 78	
	1,830 46	
Printing, Cambridge Chronicle Co.	10 89	
Use of chairs, Pettingell & Pear	8 00	
Amounts carried forward	$14,660 05	$18,700 00

Amounts brought forward		$14,660 05	$18,700 00
Alterations and repairs: —			
Carpentry: —			
O. B. French	$8 94		
I W. Gillespie	64 59		
Michael F. Keenan	58 04		
W. H. Norris	524 68		
John Quin	16 37		
	———	672 62	
Clock repairs: —			
E Howard Watch Company . .	$9 05		
T. M. Kenney	5 50		
	———	14 55	
Elevator repairs: —			
Whittier Machine Company . .		62 03	
Fence, A. Simpson, agent . . .		15 60	
Furniture and furnishings — repairs: —			
H. N. Hovey	$7 00		
J. A. Kennedy	5 00		
Worcester Bros.	15 80		
	———	27 80	
Heating and ventilating apparatus and repairs: —			
Brock Bros.	$25 31		
John B. Byrne	204 41		
Greene & Co.	96 48		
W. Haley	37 75		
Higgins & Co.	15 77		
New Britain Machine Co. . . .	18 80		
Roberts Iron Works Co. . . .	5 48		
B. F. Sturtevant Co.	32 05		
	———	436 05	
Labor, Edward S. Dowling . . .		6 00	
Lighting apparatus repairs: —			
Brock Bros.	$10 48		
Greene & Co.	8 20		
	———	18 68	
Painting and glazing: —			
J. L. P. Ackers	$173 74		
M. A Feeley	502 73		
Chas. A. Sawyer	575 20		
	———	$1,251 67	
Plastering, Wm. J. Heron . . .		10 25	
Plumbing: —			
Brock Bros.	$57 32		
E. W. Clark	10 75		
Amounts carried forward . .	$68 07	$17,175 30	$18,700 00

Amounts brought forward . . .		$17,175 30	$18,700 00
Plumbing: —			
Levi Hawkes	23 16		
John J. Long	30 80		
H. L. Rose	17 22		
		139 25	
Repairing front door lights: —			
N. E. Art Glass Works . . .		12 00	
Re-covering awnings, V. DeLue & Co.		40 00	
Roof repairs: —			
John J. Blevins	$47 92		
Howard F. Peak	28 53		
		76 45	
Sundries		30 47	
Supplies: —			
Clock, Simon Flaig		5 25	
Electrical supplies and apparatus: —			
F. Bryant & Co.	$24 88		
The Shelby Electric Co. . . .	50 00		
		74 88	
Extinguishers, W. H. Banfil . .		67 50	
Furniture and furnishings: —			
Clinton Wire Cloth Company . .	$8 75		
Chas. D. Craigie	5 00		
V. De Lue & Co.	56 00		
S. H. Harrington	17 00		
W. W. Pratt	5 50		
Albert H. Ricker	6 00		
The Williams Table and Lumber Co.	162 00		
		260 25	
Hardware, tools and supplies: —			
Burditt & Bynner	$66 36		
Wm. H. Claflin & Co.	6 50		
D. H. Deau	7 50		
D. W. Hyde & Co.	8 48		
Chas. Munroe	30 67		
Phipps Bros.	27 35		
Isaac Sexton & Co.	20 00		
L. A. Stingel	8 32		
F. A. White	5 50		
		180 68	
Ice, Fresh Pond Ice Company . .		52 00	
Oil and engine supplies: —			
G. P. Anderson	$33 96		
Lubron Packing Company . . .	9 46		
		43 42	
Safe, The Mosler Safe Company . .		250 00	
Amounts carried forward		$18,407 45	$18,700 00

Amounts brought forward		$18,407 45	$18,700 00
Soap: —			
Fels & Co.	$9 00		
J. A. Holmes & Co.	6 25		
		15 25	
Sponge, E. H. Patten		8 00	
Sundries		28 97	
Total			18,459 67
Balance unexpended			$240 33

SUMMARY: EXPENDED.

For salaries of janitors	$10,538 43
Fuel	2,208 27
Lights	1,830 46
Alterations and repairs	2,896 31
Supplies	986 20
Total	$18,459 67

PUBLIC PROPERTY (Incidentals).

Appropriation	$5,450 00

EXPENDED.

For salaries: —			
Supt. of Buildings, Wm. H. Gray	$2,000 00		
Inspectors: —			
J. W. Emery	1,000 00		
C. H. M. Hunnewell	1,000 00		
Clerk, Lillian W. Hyde	313 00		
		4,313 00	
Bicycle, L. A. Stingel		50 00	
Bicycle repairs, J. Barry		10 65	
Care and repair of tower clocks: —			
Chas H. Chandler	$26 00		
The E. Howard Watch & Clock Co.	22 05		
A. K. Jones	52 00		
J. B. Mace	26 00		
H. S. Woodworth	32 00		
		158 05	
Car tickets, Boston Elevated Railway Company		150 00	
Harness repairs, Chas. W. Dailey		7 85	
Horse board, Charles W. Dailey		242 00	
Horse-shoeing: —			
Chas. W. Dailey	$11 63		
Street Department	7 00		
		18 63	
Amounts carried forward		$4,950 18	$5,450 00

Amounts brought forward		$4,950 18	$5,450 00
Photographs, Jos. L. Gomes		9 00	
Repairing buggy, Richard Tyner & Son		16 50	
Sleigh, David Fudge & Son		10 00	
Stationery and printing: —			
Cambridge Chronicle Company	$27 75		
Caustic & Claflin	9 44		
Cotton & Gould	75 98		
Frost & Adams Company	17 18		
Stationery Department	20 76		
		151 11	
Sundries		37 90	
Telephone rent and tolls		150 10	
Wagon, Richard Tyner & Son		125 00	
Total			$5,449 79
Balance unexpended			$ 21

PUBLIC PROPERTY, New Schoolhouse, Ward Five (Ellis School).

Appropriations			$21,219 80
EXPENDED.			
For bricks, M. W. Sands		$31 20	
Building contract, F. G. Coburn & Co.		20,795 00	
Electrical work, F. Bryant & Co.		26 63	
Hardware and supplies: —			
Burditt & Bynner		66 12	
Labor, as per pay-rolls		15 25	
Plans, etc, Aaron H. Gould		240 00	
Service pipe and repairs, Cambridge Gas Light Company		19 51	
Table, Osborn Furniture Company		2 95	
Valves, Isaac Coffin & Co.		13 50	
Total			$21,210 16
Balance unexpended			$9 64

PUBLIC PROPERTY (Ellis School Furnishings).

Appropriation			$3,000 00
EXPENDED.			
For clocks, T. M. Kenney		$98 00	
Covering pipes, John J. Dowd		227 00	
Electric work, F. Bryant & Co		11 40	
Amounts carried forward		$336 40	$3,000 00

Amounts brought forward		$336 40	$3,000 00
Furniture and furnishings: —			
Chandler Adjustable Chair and Desk Works	$1,468 75		
Derby Desk Company	289 10		
Heywood Bros. & Wakefield Co.	105 00		
Wm. H. Kelley & Co.	115 00		
George S. Perry & Co.	192 00		
Webster, Cook & Co.	233 95		
Worcester Bros.	12 71		
		2,416 51	
Globe barrels, Isaac Sexton & Co.		30 00	
Plumbing, Chas. Moore & Son		64 69	
Sundries		1 34	
Supplies, F. A. White		24 65	
Total			$2,873 59
Balance unexpended			$126 41

PUBLIC PROPERTY (New Latin Schoolhouse).

Appropriation			$63,669 22
	EXPENDED.		
For building contract: —			
John S. Jacobs & Son		$47,723 32	
Electric work, Clark & Mills		2,654 22	
Foot-light coups, Standard Brass Co.		6 00	
Heating apparatus, Lynch & Woodward		5,129 55	
Labor, as per pay-roll		1,868 18	
Plans, etc.: —			
Hartwell, Richardson & Driver		2,182 00	
Plastering, Wm. J. Heron		212 80	
Plumbing, Pierce & Cox		2,740 25	
Service pipe, Cambridge Gas Light Co.		28 60	
Sods, James Gray		74 12	
Teaming, filling, etc.: —			
James Culhane	$17 60		
P. H. Dardis	10 11		
Thomas O'Hara	16 75		
Timothy O'Keefe	226 58		
Michael O'Sullivan	8 50		
Jeremiah Sullivan	386 77		
Sundry persons	207 75		
		874 06	
Total			63,493 10
Balance unexpended			$176 12

PUBLIC PROPERTY (New Latin Schoolhouse Furnishings.)

Appropriation			$25,500 00
	EXPENDED.		
For advertising: —			
Boston Herald Company	$13 75		
Cambridge Chronicle Company	1 36		
Globe Newspaper Company	13 50		
		28 61	
Electrical supplies and lighting apparatus: —			
Cambridge Gas Light Company	$15 57		
Cambridge Electric Light Company	20 33		
Clark & Mills	59 48		
E. A. Browne Company	1,528 95		
Simplex Electric Company	82 50		
		1,706 83	
Furniture and furnishings: —			
Derby Desk Company	$675 50		
Alfred Hale & Co.	49 20		
H. J. Harwood	415 60		
Heywood Bros. & Wakefield Co.	3,934 62		
Wm H. Kelley & Co.	384 62		
J. A. Kennedy	344 50		
John Quin	115 00		
Webster, Cook & Co.	78 00		
Worcester Brothers	203 16		
		6,200 20	
Gas Stove, Smith & Anthony Company		14 04	
Hardware, tools, and supplies: —			
Isaac Sexton & Co.	$60 00		
F. A. White	104 65		
		164 65	
Heating apparatus, Lynch & Woodward		211 92	
Laboratories, John S. Jacobs & Son		11,585 45	
Ladder, C. W. H. Moulton & Co.		9 00	
Painting entrances, John S. Jacobs & Son		1,055 00	
Pipe: —			
National Conduit and Cable Company	$25 05		
Walworth Manufacturing Company	12 00		
		37 05	
Plans, etc., Hartwell, Richardson & Driver		1,852 00	
Plaster work, Wm. J. Heron		508 41	
Printing, Cambridge Chronicle Company		4 90	
Stone steps, Austin Ford & Son		274 00	
Amounts carried forward		$23,652 06	$25,500 00

Amounts brought forward		$23,652 06	$25,500 00
Teaming, Chas W. Sulivan		3 00	
Trap, Barbour, Stockwell & Co.		4 90	
Total			$23,659 96
Balance unexpended			$1,840 04

PUBLIC PROPERTY (Addition to Peabody School).

Appropriation			$17,458 24
	EXPENDED.		
For Bricks, M. W. Sands		$98 80	
Building contract, Henry McGahey		15,437 25	
Conductors, John J. Blevins		89 40	
Copper boiler, Lynch & Woodward		148 00	
Electric bells, Clark & Mills		4 10	
Hardware: —			
Burditt & Williams	$4 80		
H. M. Sanders & Co.	53 25		
		58 05	
Labor, as per pay-rolls		302 55	
Loam, Jeremiah Sullivan		109 21	
Mason work and carpentry: —			
Henry McGahey		903 88	
Plans, etc., George Fogerty		195 00	
Plumbing, Ernest W. Clark		24 19	
Teaming, Jeremiah Sullivan		15 75	
Total			$17,386 18
Balance unexpended			$72 06

PUBLIC PROPERTY (Peabody School Furnishings).

Appropriation			$2,300 00
	EXPENDED.		
For clocks and repairs, T. M. Kenney		$71 00	
Electric work, Clark & Mills		36 00	
Furniture and furnishings: —			
Chandler Adjustable Chair and Desk Works	$254 40		
J. L. Hammett Company	8 00		
Amounts carried forward	$262 40	$107 00	$2,300 00

Amounts brought forward . . .	$262 40	$107 00	$2,300 00
Furniture and furnishings: —			
S. H. Harrington	231 50		
Heywood Bros. & Wakefield Co. .	1,182 50		
Wm. H. Kelley & Co. . . .	52 00		
Wm. Leavens & Co.	114 84		
Webster, Cook & Co. . . .	298 00		
		2,141 24	
Sundries		5 59	
Total			$2,253 83
Balance unexpended			$46 17

PUBLIC PROPERTY, (New Schoolhouse, Ward Two, Roberts).

Appropriation			$32,916 40
EXPENDED.			
For architect's services: —			
George A. Moore		$480 73	
Building contract, Lord Bros. . .		31,439 72	
Electric work, Clark & Mills . . .		5 15	
Fence, A. Simpson, agent . . .		112 86	
Furniture: —			
Chandler Adjustable Chair and Desk Works	$341 20		
Webster, Cook & Co.	259 00		
		600 20	
Heating apparatus: —			
S. C. Higgins		110 59	
Plumbing, Levi Hawkes . . .		5 15	
Service pipe: —			
Cambridge Gas Light Company . .		76	
Tanks, Standard Oil Company . .		15 00	
Total			32,770 52
Balance unexpended			$145 88

PUBLIC PROPERTY (Roberts School Furnishings).

Appropriation			$3,000 00
EXPENDED.			
For clocks, T. M. Kenney . . .		$91 00	
Amounts carried forward		$91 00	$3,000 00

Amounts brought forward		$91 00	$3,000 00
Furniture: —			
Chandler Adjustable Chair and Desk Company	$1,778 15		
Derby Desk Company	228 15		
S. H. Harrington	267 00		
Heywood Bros. & Wakefield Co.	78 00		
Houghton & Dutton	23 00		
George S. Perry & Co.	192 00		
Webster, Cook & Co.	52 20		
		2,618 50	
Gas fittings, Higgins & Co.		27 94	
Globe barrels, Isaac Sexton & Co.		30 00	
Hardware and supplies: —			
Burditt & Bynner	$57 62		
F. A. White	43 91		
		101 53	
Oil and packing: —			
Lubron Packing Company		58 50	
Sundries		1 32	
Total			$2,928 79
Balance unexpended			$71 21

PUBLIC PROPERTY (Heating Morse and Putnam Schools).

Appropriation			$32,000 00
EXPENDED.			
For Morse School: —			
Contracts: —			
J. M. and C. J. Buckley	$2,997 00		
Lynch & Woodward	12,975 00		
		15,972 00	
Plans, etc., George Fogerty		159 72	
		$16,131 72	
Putnam School: —			
Contract, Lynch & Woodward		15,622 00	
Plans, etc., George Fogerty		156 22	
		15,778 22	
Total			$31,909 94
Balance unexpended			$90 06

PUBLIC PROPERTY (Remodelling Otis School).

Appropriation		$8,000 00
EXPENDED.		
For contract, William Crane	$7,966 00	
Total		$7,966 00
Balance unexpended		$34 00

PUBLIC PROPERTY (Rebuilding Harvard Schoolhouse).

Appropriation		$30,000 00
Additional appropriation		17,000 00
		$47,000 00
RECEIVED.		
For old copper	$204 30	
EXPENDED.		
For building contract, Briggs Bros.	$20,806 65	
Carpentry, W. H. Norris	253 85	
Electric work, Clark & Mills	125 00	
Labor, as per pay-rolls	431 99	
Plans, etc., George Fogerty	1,612 68	
Plumbing, D. J. Keefe & Co	24 57	
Sundries	1 54	
Teaming and moving furniture: —		
P. Biggin	$82 00	
J. R. Hersum & Co.	48 00	
Chas. McMahon	24 76	
Thomas O'Hara	15 75	
David O'Mara	20 25	
Barry F. St. George	15 75	
Jeremiah Sullivan	58 76	
Peter Tumilty	7 88	
	273 15	
Varnishing, etc., J. L P. Ackers	236 05	
Total		$23,765 48
Balance unexpended		$23,234 52

PUBLIC PROPERTY (Schoolhouses, Care and Repairs).

Appropriation	$72,600 00
Transferred from Public Property City Buildings	4,500 00
Amount carried forward	$77,100 00

Amount brought forward			$77,100 00
	EXPENDED.		
For salaries of janitors		$30,123 94	
Expressage and moving furniture: —			
P. Biggin	$173 00		
Jas. Culhane	6 00		
J. R. Hersum & Co	27 75		
John R. Kenney	12 50		
Chas. McMahon	36 00		
David O'Mara	6 75		
Sundry persons	3 75		
		265 75	
Fuel: —			
Coleman Bros.	$630 58		
Dennis, Thompson, Pierce Co.	11,050 84		
P. F. Gayton & Co.	219 12		
Metropolitan Coal Co.	13 17		
Richardson & Bacon	6 25		
Weighing, H. W. Brooks	129 05		
		12,049 01	
Inspecting boilers, Everett B. Dyer		50 00	
Lights: —			
Cambridge Electric Light Co.	$709 31		
Cambridge Gas Light Co.	1,031 98		
Repairs	5 88		
		1,747 17	
Plans, etc , George Fogerty		1,263 76	
Rent: —			
Alexander Dickinson	$161 00		
John F. O'Brien	325 00		
		486 00	
Sundries		10 96	
Telephone rent and tolls		72 85	
For alterations and repairs: —			
Carpentry: —			
M. C. Beedle	$367 41		
E. W. Boynton & Co.	15 36		
John C. Buckley	141 50		
N. W. Bunker	36 55		
Bunker & Allcock	31 47		
Colin Chisholm	732 30		
D. K. Dinsmore	215 84		
W. Fillmore & Co.	805 90		
O. B. French	197 94		
F. B. Furbish	237 01		
Amounts carried forward	$2,781 28	$46,069 44	$77,100 00

Amounts brought forward . . .	$2,781 28	$46,069 44	$77,100 00
For alterations and repairs: —			
Carpentry: —			
I. W. Gillespie	41 13		
Haley & Powers . . .	23 35		
E. R. Hazen	1 80		
Michael F. Keenan	96 43		
John Nesbitt	39 95		
W. H. Norris	1,369 34		
John Quin	548 46		
I. B. Rice	111 07		
C. S. Roach	78 65		
G. W. Wiggin & Co. . . .	88 29		
F. M. Wilkins	6 00		
		5,185 75	
Clock repairs: —			
A. J. Applegate	$20 00		
Simon Flaig	5 00		
E. Howard Watch and Clock Co. .	10 80		
T. M. Kenney	28 00		
Jas. A. Rice	10 50		
Sundry persons	9 75		
		84 05	
Drain work, Samuel McCulloch .		70 85	
Electrical work: —			
F. Bryant & Co.	$236 57		
Clark & Mills	26 60		
Inspection of wires	20 41		
		283 58	
Fence, A. Simpson		20 01	
Furniture and furnishings—repairs: —			
W. L. Achorn	$8 00		
Brock Brothers	22 38		
F. M. Eaton	31 80		
Sundry person	5 45		
		67 63	
Furnishing and setting granite curbing, Henry McGahey . . .		275 35	
Heating and ventilating repairs: —			
Brock Brothers	$286 37		
Brock & Eaton	187 39		
F. W. Foster Manufacturing Co. .	75 00		
Green &. Co.	1,181 79		
Amounts carried forward . .	$1,730 55	$52,056 66	$77,100 00

Amounts brought forward	$1,730 55	$52,056 66	$77,100 00
For alterations and repairs: —			
Heating and ventilating repairs: —			
W. Haley	377 44		
S. C. Higgins	327 22		
Higgins & Co.	517 48		
Edw. Kendall & Sons . . .	17 02		
Lynch & Woodward . . .	8 83		
Moynahan & Co.	295 00		
J. F. O'Brien	10 00		
J. F. Pennell	114 73		
Albert H. Ricker	43 50		
Roberts Iron Works Company .	58 86		
D. J. Wild & Co.	111 05		
	———	3,611 68	
Lighting apparatus repairs: —			
Thos. J. Daly	$25 00		
W. Haley	16 16		
John J. Long	52 25		
Sundry persons	2 45		
	———	95 86	
Mason work: —			
John B. Byrne	$466 00		
A. Chapin	104 94		
A. W. Curtis	9 50		
J. Delaney	121 62		
Henry McGahey	535 75		
Frank J. O'Reilley	40 85		
J. J. Sullivan	259 33		
	———	1,537 99	
Painting and glazing: —			
J. L. P. Ackers	$1,226 96		
L. Bresnahan	320 50		
Duffy Bros.	235 50		
M. A. Feeley	458 50		
M. F. Marks	7 25		
Chas. A. Sawyer	81 31		
Daniel F. Smith	13 20		
J. F. Smith	150 00		
Wood Bros. & Co.	213 00		
Sundry persons	12 30		
	———	2,718 52	
Plaster work: —			
Wm. Gallagher	$64 50		
Wm. J. Heron	217 13		
G. H. Lambert	36 92		
J. S. Murray	56 03		
Thomas Ryan	58 43		
	———	433 01	
Amounts carried forward . . .		$60,453 72	$77,100 00

Amounts brought forward		$60,453 72	$77,100 00
For alterations and repairs: —			
Plumbing, etc.: —			
Arthur W. Balcom	$416 18		
A. Baumeister	189 35		
Brock & Eaton	281 50		
Brock Bros.	1,103 71		
Buckley & Young	252 11		
E. W. Clark	1,883 24		
Chas. A Fallon	156 30		
Greene & Co.	100 55		
W. Haley	418 58		
S. C. Higgins	19 58		
D. J. Keefe & Co.	807 80		
John J. Long	401 74		
Moynahan & Co.	1,047 37		
J. T. Phelan	785 39		
Pierce & Cox	77 07		
Jas. A. Reid	1,004 15		
Albert H. Ricker	105 68		
H. L. Rose	1,040 35		
John H Stevens & Co. . . .	957 48		
W. H. Sweeney	445 37		
D. J. Wild & Co.	314 88		
Sundry persons	21 14		
		11,829 52	
Removing soil, R. M. Johnson . .		44 00	
Roof repairs: —			
John J. Blevins	$647 63		
G. B. Dunnells	3 00		
		650 63	
Supplies: —			
Clocks: —			
J. F. Bacon	$4 50		
Simon Flaig	15 50		
T. M. Kenney	41 75		
Jas. A. Rice	5 00		
		66 75	
Disinfectants: —			
C. W. Lerned & Co. . . .	$12 50		
T. W. Little	4 17		
Sulpho-Napthol Company . .	27 00		
		43 67	
Dusters, brooms, brushes, etc.: —			
Burditt & Bynner	$107 15		
F. M. Eaton	12 00		
Murphy, Leavens & Co. . . .	4 40		
Amounts carried forward . .	$123 55	$73,088 29	$77,100 00

Amounts brought forward . . .	$123 55	$73,088 29	$77,100 00
Supplies: —			
Dusters, brooms, brushes, etc.: —			
E. H. Patten	54 00		
F. Pelkey	5 25		
G. H. Worcester & Co. . . .	270 80		
		453 60	
Extinguishers, W. H. Banfil . .		81 00	
Furniture and furnishings: —			
American Blackboard Company .	$532 16		
American School Furnishing Co. .	412 50		
Burditt & Bynner	71 44		
Chandler Adjustable Chair and Desk Works	622 23		
Clinton Wire Cloth Co. . . .	9 00		
S. H. Harrington . . .	19 60		
J. L. Hammet Co.	78 63		
Heywood Bros. and Wakefield Co..	87 25		
V. O. Kalberg	12 00		
John H. Kelsey	17 20		
J A. Kennedy	43 50		
Wm. Leavens & Co. . . .	59 40		
George W. Smith	76 65		
Union Glass Co	29 47		
Worcester Bros.	70 82		
Sundry persons	11 27		
		2,153 12	
Gravel, Thomas O'Hara . .		34 50	
Hardware, tools and supplies: —			
G. P. Anderson	$34 20		
Brock Bros.	143 73		
Brock & Eaton	13 24		
Burditt & Bynner	438 53		
Wm. H. Claflin & Co. . . .	48 30		
The Cling-Surface Manufacturing Company	7 50		
Dover Stamping Co. . .	22 20		
J. B. Higgins	6 45		
Charles Moore & Son . . .	6 10		
W. A. Morrison . . .	21 00		
Morse & Whyte	24 68		
C. W. H. Moulton & Co. . .	33 10		
Phipps Bros.	5 95		
Read & McGafligan . . .	6 50		
Isaac Sexton & Co. . .	72 50		
L. A. Stingel	26 58		
Amounts carried forward . .	$910 56	$75,810 51	$77,100 00

Amounts brought forward . . .	$910 56	$75,810 51	$77,100 00
Supplies: —			
Hardware, tools and supplies: —			
Walworth Manufacturing Co. .	6 55		
M. C Warren & Co. . . .	7 50		
F. A. White	22 39		
Sundry persons	33 76		
		980 76	
Lamp and electrical supplies: —			
F. Bryant & Co.	$12 75		
Cambridge Electric Light Company,	43 20		
George F. Dickson . . .	1 50		
Electric Gas Lighting Company .	12 25		
L. Erickson	12 00		
Pettingell Andrews Company . .	17 18		
Simplex Electric Company . .	8 45		
George M. Stevens	34 00		
		141 33	
Lumber: —			
Geo. W. Gale Lumber Company .	$27 68		
P. R. Rideout	4 68		
		32 36	
Oil: —			
Leonard & Ellis	$23 00		
Standard Oil Company . . .	4 00		
		27 00	
Range: —			
Cambridge Gas Light Company .		12 10	
Sawdust, Geo. G. Page Box Company,		18 50	
Washing powder and soap: —			
Standard Chemical Company . .	$55 93		
Chas. R. Teele	11 25		
Titer, Cook & Co.	10 26		
		77 44	
Total			$77,100 00

SUMMARY: EXPENDED.

For salaries of janitors . . .	$30,123 94	
Fuel	12,049 01	
Lights	1,747 17	
Rents	558 85	
Alterations and repairs	28,487 94	
Supplies	4,133 09	
		$77,100 00

PUBLIC PROPERTY (Rifle Range).

Appropriation		$800 00
EXPENDED.		
For carpentry, W. H. Norris	$373 60	
Castings, Broadway Iron Foundry	108 00	
Electrical supplies, F. Bryant & Co.	78 80	
Removing brushes, W. H. Norris	16 00	
Total		$576 40
Balance unexpended		$223 60

PUBLIC PROPERTY (Furnishing City Treasurer's Safe).

Appropriation		$700 00
EXPENDED.		
For fittings for safe: —		
Fenton Metallic Manufacturing Co.	$700 00	
Total		$700 00

SCHOOL DEPARTMENT (Care of Truants.)

Appropriation		$2,500 00
EXPENDED.		
For Board of truants: —		
Middlesex County Truant School	$1,788 29	
Car tickets: —		
Boston & Maine Railroad Company	43 05	
Tota		$1,831 34
Balance unexpended		$668 66

SCHOOL DEPARTMENT (Flags).

Appropriation		$250 00
EXPENDED.		
For bunting and line: —		
Irving W. Wheeler & Co.	$38 60	
Painting poles, Jacob Johansen	79 00	
Amounts carried forward	$117 60	$250 00

Amount brought forward		$117 60	$250 00
Repairing flags: —			
Frank Greenidge & Co. . . .	$59 00		
Jacob Johansen	6 00		
		65 00	
Setting flag-poles, W. H. Norris . .		57 97	
Work on halliards, G. B. Dunnells .		9 00	
Total			$249 57
Balance unexpended			$ 43

SCHOOL DEPARTMENT (Incidentals).

Appropriation			$1,300 00
Transferred from School Department, text-books and supplies .			300 00
			$1,600 00
EXPENDED.			
For salaries of: —			
Secretary, S. B. Hubbard . . .	$300 00		
Messenger, Chas. M. Jones . . .	25 00		
		325 00	
Car tickets: —			
Boston Elevated Railway Company .		150 00	
Cash expended, Francis Cogswell . .		28 07	
Clerical assistance: —			
Christopher Haworth		28 25	
Examination of air, Charles Moline .		75 00	
High School Graduating Exercises: —			
Expenses of theatre: —			
Harvard University		10 58	
Orchestra: —			
Cambridge Festival Orchestra . .		56 00	
Rent of piano, Briggs & Briggs . .		15 00	
Services with stereopticon: —			
John H. Thurston		10 00	
Lantern slides, Fred'k W. Woolway .		5 05	
Labor, Thomas Murphy . . .		21 25	
Music, Oliver Ditson Company . .		6 75	
Postage: —			
S. B. Hubbard	$52 00		
F. M. Small	20 00		
		72 00	
Stationery, printing and typewriting supplies: —			
Cambridge Chronicle Company . .	$29 25		
Caustic & Claflin	168 39		
Louis F. Weston	126 20		
		323 84	
Amount carried forward		$1,126 79	$1,600 00

Amounts brought forward		$1,126 79	$1,600 00
Statistics of private schools: —			
Lucian S. Cabot		12 00	
Sundries		20 57	
Taking census: —			
Manuel Andrew	$5 00		
Matthew Carmichael	62 50		
Wm. Earl	57 50		
Warren Ivers	54 00		
George H. Munroe	63 00		
Clair G. Persons	25 00		
Jos. L. Tobin	51 25		
		318 25	
Telephone rent and tolls		69 79	
Vaccine virus, N. E. Vaccine Company		27 50	
Total			1,574 90
Balance unexpended			$25 10

SCHOOL DEPARTMENT (Salaries).

Appropriation	$309,000 00
Transferred from Contingent Fund	2,050 00
	$311,050 00

RECEIVED.

For Education of Children at Industrial School, Commonwealth of Massachusetts	$453 50	
Error in pay-roll	13 00	
Hopkins Charity Fund	685 65	
Refund of salary,	13 00	
Tuition of non-residents	3,352 00	
Tuition at Manual Training School, Harvard College	1,155 00	
	$5,672 15	

EXPENDED.

For Salaries of: —			
Superintendent, Francis Cogswell		$3,150 00	
Superintendent's clerk, Althea B. Frost		715 00	
Agent, S. B. Hubbard		2,044 00	
Clerk, Myrta E. Smith		530 00	
Special Instructors: —			
Botany, Sarah E. Brassill	$1,000 00		
Drawing, Peter Roos	1,800 00		
" Lucia N. Jennison	800 00		
Amounts carried forward	$3,600 00	$6,439 00	$311,050 00

Amounts brought forward	$3,600 00	$6,439 00	$311,050 00
Special instructors: —			
Gymnastics, Sara E. Boudren	315 00		
" Mabel L. Cummings	320 00		
Music, Frederic E. Chapman	2,000 00		
Sewing, Nancy T. Dawe	444 00		
" Agnes Gordon	600 00		
" Alice H. Nay	600 00		
Primary, Mary A. Lewis	1,130 00		
		9,009 00	
Salaries of teachers in: —			
Latin School	19,318 68		
English High School	23,750 51		
Grammar Schools	116,123 35		
Primary Schools	83,231 10		
Wellington Training School	14,403 38		
Kindergarten Schools	13,292 11		
Substitutes	1,191 50		
Rindge Manual Training School	14,666 24		
		285,976 87	
Teachers in evening schools: —			
Drawing	$1,206 00		
High	1,499 00		
Allston	886 00		
Putnam	694 00		
Shepard	427 00		
Webster	563 00		
		5,275 00	
Salaries of truant officers		3,790 00	
Porter, John H. Lemon		530 00	
Total			$311,019 87
Balance unexpended			$30 13

SCHOOL DEPARTMENT (Text-books and Supplies).

Appropriation		$20,000 00
Transferred to School Department, incidentals		300 00
		$19,700 00
Transferred from Contingent Fund		1,000 00
		$20,700 00

RECEIVED.

For sale of and damage to books	$392 87	
Amount carried forward		$20,700 00

Amount brought forward			$20,700 00
	EXPENDED.		
For apparatus and supplies: —			
Adams, Cushing & Foster . . .	$1,380 20		
Barbour-Stockwell Company . .	58 12		
Bausch & Lomb Optical Company .	42 00		
Berry Bros	6 45		
Blodgett, Ordway & Webber . .	14 61		
Boston Woven Hose Company .	7 23		
Boston School Supply Company .	40 01		
Brown, Durrell & Co. . . .	88 67		
Broadway Iron Foundry Company .	9 43		
Brown & Wales	237 17		
Burditt & Bynner	9 16		
John B. Byrne	7 50		
Burditt & Williams . . .	47 12		
Chandler & Barber	493 13		
Chandler & Farquhar	8 21		
Davidson Rubber Company . .	85 60		
Dexter Bros.	26 11		
Dover Stamping Company . . .	6 06		
Charles Emmel	10 00		
Fitz, Dana & Co.	65 65		
Franklin Educational Company . .	7 20		
Frost & Adams Company . . .	260 90		
Greenough, Adams & Cushing . .	49 35		
John C. Haynes & Co. . . .	72 00		
J. L. Hammett Company . . .	141 91		
Holtzer-Cabot Electric Company .	56 50		
Hopkinson & Holden . . .	7 50		
Horgan, Robey & Co. . . .	155 70		
George F. King & Co. . . .	18 00		
L. E Knott Apparatus Company .	339 00		
Homer F. Livermore	6 73		
Frank P. Merrill.	19 58		
Theodore Metcalf Company . .	50 99		
Mowry & Phillips	11 50		
The Neostyle Company . . .	19 85		
The Prang Educational Company .	42 86		
Pulsifer, Cook & Co.	1,652 66		
B. F. Sturtevant Company . .	40 59		
Sundries	35 19		
Thompson, Brown & Co. . . .	50 22		
Wadsworth, Howland Company .	454 24		
Weeks & Potter Company . . .	16 53		
		6,151 43	
For Books: —			
Allyn & Bacon	$253 85		
American Book Company . . .	1,520 67		
Amounts carried forward . .	$1,774 52	$6,151 43	$20,700 00

Amounts brought forward . . .	$1,774 52	$6,151 43	$20,700 00
For books: —			
D. Appleton & Co.	8 68		
Edward E. Babb & Co. . . .	475 59		
Boston School Supply Company .	949 45		
T H. Castor & Co.	502 42		
The Chemical Publishing Company .	6 50		
Damrell & Upham	5 75		
DeWolfe, Fiske & Co. . . .	85 60		
Directors of Old South Work . .	5 00		
P. K. Foley	150 00		
Ginn & Co.	3,070 53		
J. L. Hammett Company . . .	73 40		
Harper & Bros.	72 64		
Harvard Co-operative Society . .	22 00		
D. C. Heath & Co.	621 05		
Houghton, Mifflin & Co. . . .	759 78		
Lee & Shepard	40 00		
Longmans, Green & Co. . . .	126 00		
Massachusetts Bible Society . .	27 50		
The Morse Company	30 00		
Perry Mason & Co.	15 40		
H. M. Plimpton & Co. . . .	562 17		
Sibley & Ducker	27 21		
Silver, Burdett & Co.	242 52		
Thomas R. Shewell & Co. . . .	362 98		
Willard Small	6 13		
Thompson, Brown & Co. . . .	1,992 09		
University Publishing Co. . . .	268 42		
Wm. Ware & Co.	376 00		
Williams & Rogers	219 85		
		12,879 18	
Car tickets: —			
Boston Elevated Railway Company .		50 00	
Cases, George G. Page Box Company .		20 80	
Cash expended for sundries: —			
Selma E. Berthold . . .	$20 40		
S. B. Hubbard	78 37		
		98 77	
Directories, E. F. Hunt & Co. . .		12 00	
Engraving diplomas: —			
Boston Bank Note Co. . . .		168 14	
Expressage and moving furniture: —			
Bancroft's Express . . .	$11 10		
H. W. Bettinson & Co. . .	12 65		
Amounts carried forward . .	$23 75	$19,380 32	$20,700 00

Amounts brought forward	$23 75	$19,380 32	$20,700 00
Expressage and moving furniture: —			
P. Biggin	108 25		
Danehy's Express	6 80		
W. A. Nichols	86 05		
Sawin's Express	34 61		
		259 46	
Frames, J. F. Olsson & Co		30 00	
Fuel, Coleman Bros		36 90	
Lighting apparatus, J. B. Colt & Co.		75 35	
Lumber, George W. Gale Lumber Co.		433 75	
Piano, Gertrude M. Gove		100 00	
Printing: —			
Holland Bennett	$10 00		
Cambridge Chronicle Company	11 75		
Latin and High School Review	16 00		
G. B. Lenfest	7 75		
Louis F. Weston	204 50		
		250 00	
Shade for stereopticon, Wm. H. Kelly & Co		25 00	
Stamps, H. C. Dimond & Co.		5 70	
Subscription, New England Publishing Company		12 15	
Sundries		28 08	
Telephone rent and tolls		39 00	
Tuning pianos, Chas. H. Fosgate		16 50	
Wood, Town of Lexington		5 00	
Total			$20,697 21
Balance unexpended			$2 79

SEALER OF WEIGHTS AND MEASURES.

Appropriation			$1,645 00
RECEIVED.			
For fees for sealing		$517 29	
EXPENDED.			
For Salary of Sealer, A. F. Roberts		916 63	
Car tickets, Boston Elevated Railway Company		10 00	
Horse board: —			
George D. Merrill	$100 00		
Street Department	162 00		
		262 00	
Amounts carried forward		$1,188 63	$1,645 00

Amounts brought forward		$1,188 63	$1,645 00
Sealing, Edward S. Dowling		322 50	
Stamps, James S. Ryan		5 00	
Stationery and printing:—			
Caustic & Claflin	$8 75		
Stationery Department	5 75		
		14 50	
Sundries		23 39	
Wagon, Chas. Waugh & Co.		90 00	
Total			$1,644 02
Balance unexpended			$ 98

SEWER DEPARTMENT (Construction).

Appropriation			$26,000 00
Transferred to Contingent Fund			1,300 00
			$24,700 00
RECEIVED.			
For assessments		$7,916 84	
Permits to drain		874 79	
		$8,791 63	
EXPENDED.			
For labor, as per pay-rolls		$13,231 85	
Bricks:—			
Parry Bros. & Co.	$223 13		
M. W. Sands	937 09		
		1,160 22	
Cutting stone, Austin Ford & Son		69 50	
Cost of laying timbers at Massachusetts Avenue track while building sewer, Boston & Albany Railroad Company		124 24	
Frames, covers, traps, etc.:—			
Barbour, Stockwell Company	$1,228 11		
Boston Double Catch Basin, Sewer and House Trap Company	244 75		
Edward Kendall & Sons	48 00		
		1,520 86	
Fuel:—			
Coleman Bros.	$56 00		
Dennis, Thompson, Pierce Company	19 38		
		75 38	
Gravel, sand and cobble-stones:—			
Thomas O'Hara		579 85	
Hardware:—			
Whittier Hardware Company		14 75	
Iron work, Miller & Shaw		18 81	
Amount carried forward		$16,795 46	$24,700 00

Amounts brought forward		$16,795 46	$24,700 00
Lumber: —			
George W. Gale Lumber Company	$770 34		
Wm. H. Wood & Co.	337 61		
		1,107 95	
Making steps, James Maitland		25 00	
Mill work, J. H. Keenan Company		157 03	
Oil, Standard Oil Company		4 40	
Packing, Burditt & Bynner		9 52	
Pipe and cement: —			
Fiske & Co.	$27 50		
Fiske, Homes & Co.	189 20		
D. W. Lewis	2,962 19		
Portland Stone Ware Company	1,192 82		
Windsor Cement Company	58 75		
		4,430 46	
Piles: —			
John T. Scully		54 48	
Repairs: —			
Water Works		6 30	
Teaming: —			
P. Biggin	$36 49		
Thos. O'Hara	782 90		
John T. Scully	27 00		
Jeremiah Sullivan	60 20		
		906 59	
Use of engine and pump: —			
George E. Worthen		214 00	
Use of pump: —			
E. R. Cheney		116 50	
Total			23,827 69
Balance unexpended			$872 31

SEWER DEPARTMENT (Improved Sewerage).

Appropriation	$100,000 00

EXPENDED.

For advertising and printing, Boston Herald Company		$13 00	
Bricks, M W. Sands		5,105 10	
Canvass covers, Nolan Brothers		235 40	
Cement and pipe: —			
Fiske & Co	$1,641 60		
D. W. Lewis	2,418 51		
Portland Stone Ware Company	1,240 85		
Waldo Brothers	472 50		
		5,773 46	
Amount carried forward		$11,126 96	$100,000 00

Amounts brought forward		$11,126 96	$100,000 00
Coal-tubs, Wellington-Wild Coal Co.		10 00	
Float and gate, Barbour, Stockwell Co.		137 50	
Freight, Boston & Albany Railroad Co.		67 40	
Fuel, Coleman Brothers		252 53	
Grates, covers and frames, Barbour, Stockwell Company	$244 00		
Mechanics Iron Foundry Company	36 97		
		280 97	
Gravel and sand: —			
Boston & Albany Railroad	$185 35		
Wm. B. Mullen	488 24		
Thos. O'Hara	567 20		
		1,240 79	
Hardware, tools, and repairs: —			
Burditt & Bynner	$368 85		
Chas. H. Goldsmith	13 50		
Perrin, Seamans & Co.	386 25		
Fred V. Smith	7 15		
Whittier Hardware Company	12 83		
		788 58	
Hose, Boston Woven Hose and Rubber Company		28 00	
Labor, as per pay-rolls		19,436 95	
Labor and materials Water Works Department		64 17	
Lumber, George W. Gale Lumber Co.		4,082 92	
Mill work: —			
The J. H. Keenan Company	$775 45		
D. C. Scranton	66 83		
		842 28	
Oil, Standard Oil Company		24 50	
Pipe and labor, Water Works Department		121 23	
Sand-dryer, Wm. Campbell & Co.		25 00	
Services of Civil Engineer: —			
Howard A. Carson		836 00	
Steel work, Wm. Campbell & Co.		26 56	
Stone: —			
Austin Ford & Son	$147 70		
S. & R. J. Lombard	176 40		
Wm. B. Mullen	1,392 63		
Thomas O'Hara	272 00		
		1,988 73	
Stone cutting, Austin Ford & Son		122 75	
Sundries		8 13	
Amounts carried forward		$41,511 95	$100,000 00

Amounts brought forward		$41,511 95	$100,000 00
Teaming: —			
P. Biggin	$27 00		
F. McLaughlin	48 75		
Thos. O'Hara	374 37		
John T. Scully	27 00		
Jeremiah Sullivan	21 37		
		498 49	
Tracks, Boston & Albany Railroad Co.,		109 77	
Use of engine, John T. Scully		35 00	
Use of engine and pump, E. R. Cheney		199 19	
Use of pump, George E. Worthen		546 00	
Wire rope, Lincoln, Dillaway & Co.		88 84	
Total			$42,989 24
Balance unexpended			$57,010 76

SEWER DEPARTMENT (Maintenance).

Appropriation			$20,000 00
Transferred to contingent			1,600 00
			$18,400 00
RECEIVED.			
For catch-basins and repairs: —			
Boston Elevated Railway Co.	$49 14		
Water Works Department	43 64		
		$92 78	
Materials: —			
Massachusetts Pipe Line Gas Co.		27 16	
Old rubber boots		17 20	
Pipe and cement		96 96	
Rent		108 00	
Repairing man-hole: —			
Boston Elevated Railway Co.		28 60	
Sundries		18 79	
		$389 49	
EXPENDED.			
For salaries of —			
Superintendent, T. L. Pike	$2,000 00		
Clerk, Mary E. Rowen	386 25		
		2,386 25	
Labor, as per pay-rolls		7,841 85	
Automatic register and register clocks:			
T. M. Kenney		242 50	
Bricks, M. W. Sands		123 19	
Amounts carried forward		$10,593 79	$18,400 00

Amounts brought forward		$10,593 79	$18,400 00
Car tickets: —			
Boston Elevated Railway Company .		75 00	
Carriage, F. Ivers & Son . . .		150 00	
Cart, Ames Plow Co.		92 50	
Cash paid for repairs, by R. H. Dana, to John H. Stevens & Co. . . .		99 64	
Cleaning catch-basins, John Horigan .		3,818 50	
Cutting stone, Austin Ford & Son .		81 00	
Diaphragms, Edson Manufacturing Co.		10 80	
Drain work: —			
Mrs. M. A. Hawkins	$42 23		
Samuel McCulloch	21 40		
		63 63	
Fuel: —			
Coleman Bros.	$10 00		
Dennis, Thompson, Pierce Company .	8 24		
		18 24	
Furnishings, Phillips Brothers & Co. .		9 00	
Gas, Cambridge Gas Light Company .		14 45	
Gravel and sand, Thomas O'Hara .		18 00	
Grates and Traps: —			
Barbour, Stockwell Company . .	$151 80		
Boston Double-catch Basin, Sewer and House-trap Company . .	88 34		
		240 14	
Hardware, tools and repairs and supplies: —			
Burditt & Bynner	$552 58		
C. H. Goldsmith	34 65		
James Maitland	135 52		
Morss & Whyte	11 81		
Perrin, Seamans & Co.	18 00		
D. C. Scranton	17 50		
Fred. V. Smith	13 55		
Whittier Hardware Company . .	23 58		
		807 19	
Harness and repairs: —			
F. Ivers & Son	$50 00		
W. H. Roberts	44 45		
		94 45	
Hay, grain, etc.: —			
J. Cushing & Co.	$149 99		
E. R. Luke & Co.	327 12		
		477 11	
Heater: —			
Wm. Campbell & Co.		25 00	
Amounts carried forward		$16,688 44	$18,400 00

Amounts brought forward		$16,688 44	$18,400 00
Horseshoeing:—			
J. F. Gurry & Sons	$48 00		
Street department	57 95		
		105 95	
Hose and repairs, packing, etc.:—			
Boston Woven Hose Company . .		40 64	
Iron work, Miller & Shaw . . .		87 05	
Labor, Stephen McDonald . . .		5 00	
Lumber:—			
George W. Gale Lumber Company .	$120 66		
Wm. H. Wood & Co.	153 47		
		274 13	
Meal:—			
Charles James	$9 00		
L. G. Stone & Co.	30 00		
		39 00	
Mill work:—			
J. H. Keenan & Co.	$37 93		
D. C. Scranton	18 21		
		56 14	
Oil, Standard Oil Company . . .		34 75	
Oil clothing, H. M. Sawyer & Son . .		36 54	
Pipe and cement:—			
Fiske & Co.	$27 50		
D. W. Lewis & Co.	305 05		
Portland Stone Ware Company . .	21 12		
		353 67	
Pung, F. Ivers & Son		75 00	
Recording gauge, S. P. Ferguson . .		72 50	
Repairing wagons, Chas. Waugh & Co.		26 90	
Repairs, heating, plumbing etc.:—			
Greene & Co.		7 80	
Stationery, printing, etc.:—			
Cambridge Chronicle Company . .	$17 25		
Cotton & Gould	6 10		
Stationery Department . . .	7 06		
		30 41	
Sundries		16 93	
Teaming:—			
P. Biggin	$12 50		
Thomas O'Hara	216 00		
		228 50	
Total			18,179 35
Balance unexpended			$220 65

SOLDIER'S RELIEF.

Appropriation			$2,000 00
RECEIVED.			
From the Commonwealth of Massachusetts in reimbursement, in part, of the amount the City has advanced, in conformity to the laws of the State, to volunteers and their families, or other dependants of volunteers in the army and navy		$3,128 00	
Money not called for on pay-rolls		24 00	
		$3,152 00	
EXPENDED.			
For Aid, as per pay-rolls: —			
City aid	$432 00		
State aid	1,156 00		
Military aid	104 00		
		1,692 00	
Printing, Edward F. McKenna		1 50	
Total			$1,693 50
Balance unexpended			$306 50

STATE AID.

Appropriation			$26,000 00
RECEIVED.			
From the Commonwealth of Massachusetts in reimbursement, in part, of the amount the City has advanced, in conformity to the laws of the State, to volunteers and their families, or other dependents of volunteers of the army and navy: —			
For military aid	$997 93		
State aid	13,501 00		
Burials of soldiers and sailors	700 00		
		$15,198 93	
Aid		92 29	
Money not called for on pay-roll		220 36	
		$15,511 58	
EXPENDED.			
For salary of clerk, Chas. L. Russell		900 00	
State aid	$13,808 00		
Military aid	1,408 00		
Soldiers' and sailors' aid	7,454 00		
		22,670 00	
Amounts carried forward		$23,570 00	$26,000 00

Amounts brought forward		$23,570 00	$26,000 00
Aid: —			
City of Malden	$65 00		
City of Quincy	17 50		
Town of Spencer	10 00		
		92 50	
Ambulance fee, Chas. W. Dailey		6 00	
Board and care: —			
Cambridge almshouse	$164 65		
Danvers Insane Hospital	411 82		
Medfield Insane Asylum	292 00		
Worcester Insane Asylum	173 31		
Worcester Insane Hospital	50 61		
		1,092 39	
Burials: —			
David F. Corcoran	$35 00		
Jos. J. Kelley	35 00		
Horace D. Litchfield	140 00		
Judson Litchfield	140 00		
C. H. Lockhart	70 00		
W. A. Taylor	35 00		
		$455 00	
Car tickets, Boston Elevated Railway Company		15 00	
Clerical services, E. W. Pike		12 00	
Directory, E F. Hunt & Co.		3 00	
Fuel: —			
Baker, Hunnewell Company,	$88 25		
Clark Bros.	7 75		
		96 00	
Stationery and printing: —			
Cotton & Gould	1 25		
Powell & Co.	80 75		
Stationery Department	7 88		
		89 88	
Supplies, Yerxa & Yerxa		93 00	
Total			25,524 77
Balance unexpended			$475 23

STATIONERY AND PRINTING.

Appropriation		$3,000 00
RECEIVED.		
From sundry departments for supplies	$923 23	
Amount carried forward		$3,000 00

Amount brought forward			$3,000 00
	EXPENDED.		
For advertising: —			
W. T. Billings	$9 00		
Cambridge Chronicle Company	8 96		
Daniel A. Buckley	16 87		
F. S. Hill	9 00		
Times Publishing Company	27 00		
		70 83	
Binding: —.			
David Farquhar	$52 50		
H. O. Houghton & Co.	21 09		
J. H. H. McNamee	40 20		
		113 79	
Examination of bills: —			
Charles Walker		20 00	
Postage: —			
F. M. Small		800 00	
Printing and engraving: —			
Cambridge Chronicle Company	78 26		
Caustic & Claflin	1,250 25		
M. T. Callahan	75 00		
The Co-operative Press	14 00		
J. A. Cummings Printing Company	65 00		
J. Frank Facey	45 50		
		1,528 01	
Stationery, etc: —			
Adams, Cushing & Foster	$10 16		
Warren T. Billings	5 00		
Carter's Ink Company	9 00		
Cambridge Chronicle Company	10 75		
Cotton & Gould	314 39		
J. Frank Facey	20 25		
Edward F. McKenna	10 00		
Sumner & Goodwin	5 50		
Charles H. Thurston	60 00		
		445 05	
Stamps, T. S. Buck		6 20	
Total			$2,983 88
Balance unexpended			$16 12

STREET DEPARTMENT (Bridges).

Appropriation			$2,400 00
	EXPENDED.		
For salaries of draw-tenders: —			
John Gaughan	$726 00		
John F. Powers	747 40		
		$1,473 40	
Amounts carried forward		$1,473 40	$2,400 00

Amounts brought forward		$1,473 40	$2,400 00
Laborers, as per pay-rolls		210 14	
Hardware, tools and repairs, and supplies: —			
Burditt and Bynner	$6 50		
F. A. White	17 95		
		24 45	
Iron work, Miller & Shaw		117 79	
Lumber: —			
John S. Clary	$142 94		
Wm. H. Wood & Co.	340 17		
		483 11	
Piles, John T. Scully		50 00	
Sundries		11 11	
Total			$2,370 00
Balance unexpended			$30 00

STREET DEPARTMENT (Cleaning).

Appropriation			$34,000 00
Transferred from Street Department maintenance			1,750 00
			$35,750 00
EXPENDED.			
For labor, as per pay-rolls		$32,821 02	
Hardware, tools and supplies: —			
Barbour, Stockwell Company	$35 04		
Joseph Breck & Sons	238 50		
Burditt & Bynner	104 50		
Dodge, Haley & Co.	149 05		
		527 09	
Mill work, Ira G. Hersey		8 78	
Sweepers and repairs: —			
Barbour, Stockwell Company	$28 49		
Edson Manufacturing Company	641 96		
Good Roads Machine Company	25 90		
Charles Hvass	105 00		
W. G. Hallock	14 00		
Hickory Broom Company	45 00		
		860 35	
Sundries		10 63	
Teaming, sundry persons		1,522 12	
Total			$35,749 99
Balance unexpended			$ 01

STREET DEPARTMENT (Collection of Ashes).

Appropriation			$22,000 00
EXPENDED.			
For Labor as per pay-rolls		$18,734 78	
Bicycle, J. L. Moseley		28 00	
Bicycle repairs, J L. Moseley		13 85	
Covers and repairs: —			
V. De Lue & Co.	$36 00		
George T. Hoyt & Co	78 00		
		114 00	
Hardware, tools, etc.: —			
Joseph Breck & Sons	$3 00		
Dodge, Haley & Co.	108 66		
		111 66	
Harness dressing, John H. Fuller		26 55	
Harness and repairs, Jas. Forgie & Son		90 00	
Hay, grain and straw: —			
J. Cushing & Co.	$660 26		
C. F. & G. W Eddy	195 33		
George G. Wright	692 32		
		1,547 91	
Horses, Welch & Hall		1,160 00	
Teaming, sundry persons		173 25	
Total			$22,000 00

STREET DEPARTMENT (Maintenance).

Appropriation		$81,000 00
Transferred to Street Department, cleaning		1,750 00
		$79,250 00
Add revenue		2,377 40
		$81,627 40
RECEIVED.		
For apples	$23 25	
Ashes, filling and scrapings	891 53	
Barrels	3 00	
Grading	275 00	
Horse	27 50	
Horse in pound	50	
Horse board	422 00	
Horseshoeing	357 55	
Amounts carried forward	$2,000 33	$81,627 40

Amounts brought forward		$2,000 33	$81,627 40
Labor and materials		1,468 52	
Manure		112 00	
Old material		79 33	
Refund		5 22	
Rent		12 00	
		$3,677 40	

EXPENDED.

For salaries of: —			
Superintendent, Chas. A. Brown	$2,000 00		
Clerks: —			
Geo M. Clukas	1,358 66		
Georgie W. Sanborn	295 00		
Bessie W. Sprague	79 25		
Jessie Wilde	13 25		
District foremen and sub-foremen	3,443 83		
Laborers, as per pay-rolls	31,670 42		
Injured employees paid for time lost	496 24		
		$39,356 65	
Bicycle repairs, J. L. Moseley		5 45	
Buggy, C. H. Noyes & Co.		276 00	
For carriage and wagon repairs: —			
Barbour, Stockwell Company	$7 18		
Chapman Carriage Company	53 00		
Ira G. Hersey	49 64		
F. Ivers & Son	2 75		
Miller & Shaw	4 48		
George Patterson	6 00		
		123 05	
Car tickets, Boston Elevated Railway Company		20 00	
Cart, Alex. Nixon		125 00	
Cash for sundries, Chas. A. Brown		59 53	
Cement, D. W. Lewis		71 68	
Flag, Geo. T. Hoyt & Co.		6 60	
Fuel: —			
Baker-Hunnewell Company	$1,316 35		
Coleman Brothers	20 60		
Dennis, Thompson, Pierce Company	274 02		
		1,610 97	
Gravel: —			
John McGinnis	$38 25		
Wm. B. Mullen	115 75		
Josephine E. Stone	329 00		
		483 00	
Amounts carried forward		$42,137 93	$81,627 40

Amounts brought forward . . .		$42,137 93	$81,627 40
Hardware, tools and repairs, and supplies: —			
American Stave and Cooperage Co. .	$23 00		
Ames Plow Company . . .	104 92		
Jos Breck & Sons	45 30		
Miles F. Brennan & Co. . . .	120 00		
Brock Brothers	224 60		
Burditt & Bynner	176 03		
Burditt & Williams	15 51		
A. C. Curtis	10 56		
Dodge, Haley & Co. . . .	1,212 83		
F. E. Fitts Manufacturing and Supply Company	38 42		
Fred C. Gifford	90 00		
Harrington, King & Co. . . .	8 00		
A. W. Isele & Son	9 75		
Kane & Roach	$54 00		
A. M. Loker	50 00		
Frank P Merrill	95 48		
Morss & Whyte	5 00		
Daniel J. Sullivan	26 80		
Union Glass Company . . .	14 80		
Useful Novelty Company . . .	14 40		
F. A. White	179 13		
Sundry persons	9 70		
		2,528 23	
Harness and repairs, and horse clothing: —			
W. H. Bustin & Son	$65 00		
James Forgie & Son	725 10		
F. Ivers & Son	228 61		
Hugh McCaffrey	400 69		
Joseph A. Ryan	53 40		
		1,472 80	
Hay, grain, etc.: —			
Ame & Co.	$7 50		
Otis S. Brown & Co.	397 50		
J. Cushing & Co.	5,964 19		
C. F. and G. W. Eddy . . .	131 84		
Hosmer, Robinson & Co. . . .	186 50		
Leavitt, Sanborn & Co. . .	485 75		
Lord & Webster	34 00		
E. R. Luke & Co. . . .	2,003 98		
L. G. Stone & Co.	61 25		
George G. Wright	124 90		
		9,397 41	
Horses: —			
P. H. Dardis	$220 00		
Fire Department	75 00		
Welch & Hall	285 00		
		580 00	
Amounts carried forward		$56,116 37	$81,627 40

Amounts brought forward		$56,116 37	$81,627 40
For Horse and cart covers: —			
George T. Hoyt & Co . . .	$9 35		
V. De Lue & Co.	5 52		
		14 87	
Hose, etc., Boston Woven Hose Co. .		6 40	
Lighting, Cambridge Electric Light Co.		451 97	
Lumber: —			
John S. Clary	$33 95		
Geo. W. Gale Lumber Company .	474 49		
Henry J. Winde	206 51		
Wm. H. Wood & Co.	182 29		
		897 24	
Office expenses: —			
Advertising: —			
Boston Herald Company . .	$8 00		
Cambridge Chronicle Company .	1 37		
Waltham Publishing Company .	4 38		
		13 75	
Copying press, H. M. Adams . .		4 60	
Directory, E. F. Hunt & Co. . .		3 00	
Massachusetts Year Book: —			
F. S. Blanchard & Co. . . .		3 00	
Stationery, printing and typewriting supplies: —			
W. M. Belcher & Co . . .	$2 00		
W. T. Billings	12 25		
Cambridge Chronicle Company .	33 71		
Caustic & Claflin	16 85		
Cotton & Gould	127 35		
J. Frank Facey	1 00		
Stationery Department . .	91 42		
E. W. Wheeler	13 75		
		298 33	
Telephone rent and tolls . . .		485 28	
Oils, paints, etc: —			
Clark, Brown & Co.	$21 20		
John H. Fuller	243 25		
W. A. Morrison	73 45		
Rust & Richardson Drug Co. . .	39 96		
Standard Oil Company . . .	102 75		
Sudbury Oil & Supply Co. . . .	17 55		
P. Sutherland & Co.	27 02		
Wadsworth, Howland & Co. . .	202 47		
W. A. Wood & Co.	6 60		
		734 25	
Amounts carried forward		$59,029 06	$81,627 40

Amounts brought forward		$59,029 06	$81,627 40
Prints, Fred. M. Ellis		6 00	
Removing horses: —			
Butcher's Slaughtering & Melting Association		5 00	
Repairing blankets, Mrs. Farry		8 30	
Stable repairs and fittings: —			
Bronzing and varnishing: —			
Greene & Co.	$3 50		
Carpentry and mill work: —			
Ira G. Hersey	12 69		
One-half cost of fence at city property, bordering property of A. H. Hews, Raymond St	22 50		
Plumbing, Moynahan & Co.	76 88		
Repairs, Water Works Department	308 55		
Roof repairs, H. F. Peak	31 79		
Stable fittings: —			
Brock Bros.	6 53		
W. A. Snow & Co.	3 60		
Toe calks, Bay State Forge	10 00		
		476 04	
Steam roller repairs and supplies: —			
Barbour, Stockwell Company	$487 94		
Wm. H. Gallison Company	101 15		
Good Roads Machine Company	66 00		
Gould Packing Company	17 40		
A. H. Hews & Co.	15 46		
J. H. Houghton	23 00		
The O. S. Kelly Company	380 00		
Edw. Kendall & Sons	356 78		
Miller & Shaw	136 00		
Wm. C Oastler	440 00		
Whittier Machine Company	463 56		
White Line Central Transit Company (freight)	63 25		
		2,550 54	
Stone and transportation of same: —			
Boston Elevated Railway Company	$180 22		
Fitchburg Railroad Company	39 40		
Thos. F. Kenney	21 33		
Massachusetts Broken Stone Company	265 60		
Wm. B. Mullen	3,491 38		
P. O'Riorden	56 00		
Sundry persons (field stone)	10,942 39		
		14,996 32	
Amounts carried forward		$77,071 26	$81,627 40

Amounts brought forward		$77,071 26	$81,627 40
Stone crusher repairs and supplies: —			
Barbour, Stockwell Company	$1 80		
Boston Belting Company	114 57		
Wm. H Gallison Company	16 56		
J H. Houghton	113 62		
Edw. Kendall & Sons	77 11		
Miller & Shaw	62 00		
Taylor Iron and Steel Company	573 74		
A J. Wellington	16 50		
C. White	24 75		
		1,000 65	
Sundries		32 64	
Teaming, sundry persons		2,461 03	
Vitrified paving blocks: —			
Eastern Paving Brick Company		976 32	
Work on flag-staffs, David Cass		11 26	
Total			81,553 16
Balance unexpended			$74 24

STREET DEPARTMENT (Clay Lands).

Appropriation	$3,000 00
Additional appropriation	18,000 00
	$21,000 00

EXPENDED.

For labor as per pay-rolls		$4,185 10	
Bricks, M. W. Sands		386 54	
Carting gravel, T. A. Callaghan		1,229 34	
Cutting stone, Austin Ford & Son		126 00	
Frames, grates and traps: —			
Barbour, Stockwell Company	$357 00		
Boston Double Catch Basin, Sewer and House Trap Company	151 30		
		508 30	
Freight, Fitchburg Railroad Company		192 00	
Gravel: —			
John McGinnis	$7 50		
Wm. B. Mullen	389 38		
P. O'Riorden	2,406 38		
Josephine E Stone	123 50		
		2,926 76	
Amounts carried forward		$9,554 04	$21,000 00

Amounts brought forward		$9,554 04	$21,000 00
Land and damages, heirs of James McBride		75 00	
Lumber, George W. Gale Lumber Co.		17 18	
Pipe and cement: —			
David W. Lewis	$123 47		
Sewer Department	76 70		
		200 17	
Stone: —			
Chas. McMahon	$121 76		
Wm. B. Mullen	83 90		
Sundry persons	182 80		
		388 46	
Teaming, sundry persons		1,641 64	
Tools: —			
Ames Plow Company	$29 00		
Joseph Breck & Sons	1 35		
		30 35	
Total			11,906 84
Balance unexpended			$9,093 16

STREET DEPARTMENT, PAVING (Edgestones and Sidewalks).

Appropriation	$20,000 00
Add revenue	2,500 00
	$22,500 00

RECEIVED.

For edgestone and sidewalk assessments	$10,013 47	
Labor and materials	254 55	
Street railway tax	2,500 00	
	$12,768 02	

EXPENDED.

For labor, as per pay-rolls		$7,874 51	
Artificial stone sidewalks: —			
W. A. Murtfeldt Company	$48 12		
Simpson Bros.	886 06		
		934 18	
Bicycle tire, J. L. Moseley		4 00	
Bricks, M. W. Sands		4,440 15	
Cord, Bruce R. Ware & Co.		3 00	
Freight, Fitchburg Railroad Company		472 00	
Loading gravel, P. O'Riorden		156 80	
Lumber, Geo. W. Gale Lumber Co.		77 98	
Oil, Standard Oil Company		4 40	
Amounts carried forward		$13,967 02	$22,500 00

Amounts brought forward		$13,967 02	$22,500 00
Re-cutting paving blocks: —			
Thomas Joy	$68 84		
Theodore Raymond	18 88		
		87 72	
Stationery and printing: —			
Cambridge Chronicle Company	$20 00		
Cotton & Gould	19 75		
		39 75	
Stone: —			
Boston Elevated Railway Company	$246 11		
Austin Ford & Son	65 25		
Chas. McMahon	6,761 22		
		7,072 58	
Teaming, as per pay-rolls		1,258 90	
Tools, Jos. Breck & Sons		8 55	
Total			$22,434 52
Balance unexpended			$65 48

STREET DEPARTMENT, PAVING (Crossings and Repairs).

Appropriation			$10,000 00
	EXPENDED		
For labor, as per pay-rolls		$6,845 24	
Bricks, W. Fillmore & Co.		17 50	
Cement, and lumber: —			
George W. Gale Lumber Co.	$34 92		
Wm H. Wood & Co.	3 29		
		38 21	
Concrete crossings: —			
Simpson Brothers		315 93	
Freight, Fitchburg Railroad Co.		176 00	
Lifting paving blocks, John Powers		50 08	
Loading cars: —			
Wm. B. Mullen	$6 30		
P. O'Riorden	56 20		
		62 50	
Recutting paving blocks: —			
Thomas Joy	$30 24		
Theodore Raymond	34 79		
		65 03	
Stone walk, Simpson Bros.		14 40	
Amounts carried forward		$7,584 89	$10,000 00

Amounts brought forward		$7,584 89	$10,000 00
Stone: —			
S. and R. J. Lombard	$492 16		
Charles McMahon	1,525 46		
		2,017 62	
Teaming, sundry persons		397 13	
Total			9,999 64
Balance unexpended			$ 36

STREET DEPARTMENT (Paving Harvard Square).

Appropriation			$3,365 53
RECEIVED.			
For Street Railway Tax, for 1898		$3,365 53	
EXPENDED.			
For Labor, as per pay-rolls		1,329 36	
Cement: —			
D. W. Lewis	$224 00		
Waldo Bros.	191 00		
Wm. H. Wood & Co.	55 00		
		470 00	
Concrete stone, Wm. B. Mullen		233 36	
Frames and covers: —			
Barbour, Stockwell Company		44 15	
Lumber: —			
George W. Gale Lumber Company	$3 76		
Wm. H. Wood & Co.	13 33		
		17 09	
Paving brick: —			
Eastern Paving Brick Company		1,044 00	
Road pitch: —			
New England Felt Roofing Works		22 18	
Services of paver, H. Gore & Co.		76 00	
Teaming, sundry persons		128 25	
Total			$3,364 39
Balance unexpended			$1 14

STREET DEPARTMENT (Rebuilding Portland and Prospect Streets).

Appropriation		$46,088 52
Transferred to Park Department, maintenance		998 60
		$45,089 92

RECEIVED.

For Street Railway tax for 1899	$46,088 52

EXPENDED.

For Prospect Street: —			
Labor, as per pay-rolls		$7,935 44	
Cement: —			
Waldo Bros.	$1,093 60		
Windsor Cement Company	1,411 20		
		2,504 80	
Concrete stone: —			
Wm. B. Mullen		1,655 72	
Hardware, tools and supplies: —			
Ames Plow Company	$73 66		
Brock Brothers	5 07		
Burditt & Bynner	80 55		
A. W. Isele & Son	7 50		
		166 78	
Hose, Brock Bros.		20 00	
Labor and materials, Water Works		4 00	
Loading cars, P. O'Riorden		99 00	
Lumber, George W. Gale Lumber Co.		54 15	
Oil, Standard Oil Company		39 88	
Paving blocks: —			
Eastern Paving Brick Company		8,695 11	
Road pitch, N. E. Felt Roofing Works		171 35	
Services of paver, H. Gore & Co.		136 88	
Towing-tug service: —			
E. N. Crowell	$15 00		
C. A. Fullerton	10 00		
		25 00	
Teaming, sundry persons,		2,690 24	
Transportation: —			
Fitchburg Railroad Company		584 00	
Total for Prospect Street		$24,782 35	
Amount carried forward			$45,089 92

Amount brought forward		$45,089 92
For Portland Street: —		
Labor, as per pay-rolls	$2,093 31	
Cement, Waldo Brothers	72 90	
Loading gravel, P. O'Riorden	93 00	
Stone, Charles McMahon	5,531 00	
Teaming, sundry persons	578 26	
Transportation: —		
Fitchburg Railroad Co.	168 00	
Total for Portland Street	$8,536 47	
For bricks on hand	$677 54	

SUMMARY: EXPENDED.

For Prospect Street	$24,782 35	
Portland Street	8,536 47	
Bricks on hand	677 54	
Total		$33,996 36
Balance unexpended		$11,093 56

STREET DEPARTMENT (Watering).

Appropriation		$25,500 00

REVENUE.

For assessments	$16,572 14	
Collections	1,042 15	
	$17,614 29	

EXPENDED.

For salaries of: —			
Superintendent, Chas. McHugh		$982 67	
Clerical assistance		91 50	
Laborers as per pay-rolls		902 13	
Bicycle repairs, J. L. Moseley		17 85	
Binding, David Farquhar		10 00	
Cart repairs and fittings: —			
Abbott Downing Company	$255 00		
Duff Spring Company	81 05		
J. L. & H. K. Potter	247 07		
Chas. Waugh & Co.	6 85		
		589 97	
Conductors, Boston Woven Hose and Rubber Co.		80 00	
Amounts carried forward		$2,674 12	$25,500 00

Amounts brought forward		$2,674 12	$25,500 00
Hardware, supplies, etc.: —			
Barbour, Stockwell Company . .	$15 51		
Dodge, Haley & Co.	191 51		
		207 02	
Hose, etc., Boston Woven Hose and Rubber Company		28 63	
Horse, M. Columbus		80 00	
Lumber, George W. Gale Lumber Co. .		23 04	
Paints, oil, brushes, etc.: —			
Burditt & Bynner	$106 80		
Wadsworth, Howland & Co. . .	63 33		
		170 13	
Stationery and printing: —			
Cambridge Chronicle Company . .	$6 00		
Cotton & Gould	16 75		
		22 75	
Sprinkling by contract, sundry persons		22,285 45	
Sundries		6 85	
Total			$25,497 99
Balance unexpended			$2 01

TREASURY DEPARTMENT.

Appropriation			$14,700 00
RECEIVED.			
For fees from sundry persons . . .		$2,366 19	
EXPENDED.			
For salaries of: —			
City Treasurer, Wm. W. Dallinger .	$3,000 00		
Clerks: —			
E. G. Stevens	1,565 00		
E. J. Howlett	1,252 00		
J. H. Webber	1,252 00		
C. H. Dodge	939 00		
E. E. Estes	782 50		
P. B. Dallinger	626 00		
Temporary Clerks	945 30		
		10,361 80	
Advertising: —			
Boston Daily Advertiser . . .	28 50		
Cambridge Chronicle Company . .	36 18		
		64 68	
Carriage hire, M. J. Fairbanks . .		522 00	
Car tickets: —			
Boston Elevated Railway Company .		20 00	
Amounts carried forward		$10,968 48	$14,700 00

Amounts brought forward		$10,968 48	$14,700 00
Commissions for collecting taxes: —			
James A. Brown	$271 02		
James H. Cox	36 50		
Joseph Fox	694 94		
Warren Ivers	873 30		
Frank H. Lambert	117 00		
		1,992 76	
Directories		11 00	
Movable Cabinet: —			
Art Metal Construction Company		65 00	
Postage, F. M. Small		1,013 30	
Recording deeds, E. O. Childs		27 35	
Sundries		14 85	
Stationery printing, etc.: —			
W. T. Billings	$53 70		
Caustic & Claflin	7 47		
Wm. H. Claflin & Co.	26 50		
Cotton & Gould	72 47		
John H. Ford	237 95		
Little, Brown & Co.	5 00		
A. E. Martell & Co.	10 00		
Edward F. McKenna	16 00		
Stationery Department	33 15		
John Wilson & Son	7 50		
		469 74	
Stamps, Boston Stencil & Stamp Works		11 75	
Telephone rent and tolls		125 30	
Total			$14,699 53
Balance unexpended			$ 47

WATER WORKS (Construction).

Appropriation	$23,500 00
Additional appropriation	10,000 00
	$33,500 00

RECEIVED.

For gates	$35 00
Labor and materials	1,238 46
Old pipe	21 54
	$1,295 00

EXPENDED.

For Belting, Star Belting Company	$13 04	
Bench legs: —		
Geo. F. Blake Manufacturing Co.	21 60	
Amounts carried forward	$34 64	$33,500 00

Amounts brought forward		$34 64	$33,500 00
Bricks, N. M. Cofran & Co.		8 50	
Building brick shop, E. W. Boynton		4,653 00	
Building house, Briggs Brothers		3,825 00	
Building stable, Samuel J. Kelley		2,317 91	
Carpentry: —			
E. W. Boynton & Co.	$415 29		
S. J. Kelley	286 90		
		702 19	
Car tickets: —			
Boston Elevated Railway Company		25 00	
Electrical supplies, Clark & Mills		71 25	
Execution of court, John J. Sheenan		325 00	
Expressage: —			
Dodge's Express	$12 78		
Sundry persons	5 35		
		18 13	
For hardware, tools and supplies, and repairs: —			
Burditt & Bynner	$5 42		
Dodge, Haley & Co.	34 95		
J. D. Jewett & Co.	71 72		
James Maitland	56 44		
		168 53	
Heating apparatus: —			
Brock Bros.	$38 35		
Continental Grate Company	135 00		
Richard J. Flinn	21 00		
Greene & Co.	298 00		
S. C. Higgins	100 60		
		592 95	
Ice: —			
Boston Ice Company	$131 40		
Fresh Pond Ice Company	477 78		
		609 18	
Labor, as per pay-rolls		6,027 45	
Labor on tracks: —			
Boston & Albany Railroad Company.		5 00	
Lumber and cement: —			
Geo. W. Gale Lumber Company	$130 96		
Wm. H. Wood & Co.	71 38		
		202 34	
Magnesia coverings: —			
S. C. Nightingale & Childs		46 12	
Mason work, Wm. Crane.		95 55	
Meters and repairs: —			
Hersey Manufacturing Company	$1,044 00		
National Meter Company	74 85		
Neptune Meter Company	1,476 40		
		2,595 25	
Amounts carried forward		$22,322 99	$33,500 00

Amounts brought forward		$22,322 99	$33,500 00
Painting, etc., Chas. A. Sawyer		142 79	
Painting signs, Henry Haley		26 15	
Papering, Chas. Atkins & Co.		60 77	
Pipe, fittings, etc : —			
Barbour, Stockwell & Co.	$56 88		
Peter Barclay Manufacturing Co.	21 60		
Cambridge Gas Light Company	6 55		
Champman Valve Manufacturing Co.	1,115 04		
Davis & Farnum Manufacturing Co.	65 43		
Grundy Brass Works	63 06		
D. W. Lewis	19 95		
Sewer Department	48 01		
U. S. Cast Iron Pipe and Foundry Co.	7,140 39		
Walworth Manufacturing Company	167 06		
		8,703 97	
Plans and specifications : —			
C. H. Bartlett	$274 00		
C. H. McClare	321 45		
		595 45	
Plastering, Wm. J. Heron		23 35	
Plumbing : —			
Arthur W. Balcom	$37 56		
Levi Hawkes	2 25		
		39 81	
Pump, etc., Geo. F. Blake Mfg. Co.		158 00	
Printing, Cambridge Chronicle Co.		5 63	
Recording electrical apparatus, etc. : —			
Geo. E Winslow		161 14	
Scale and pulley, The Fairbanks Company		110 40	
Scale for testing, Priest, Page & Co.		112 00	
Setting drinking fountain : —			
Samuel McCulloch		83 55	
Setting machinery, Miller & Shaw		103 26	
Stable fittings, W. A. Snow & Co.		161 32	
Sundries		5 89	
Tanks, Roberts Iron Works Company		218 37	
Teaming, sundry persons		320 87	
Wire guard, Morss & Whyte		8 29	
Total			$33,364 00
Balance unexpended			$136 00

WATER WORKS (Fresh Pond Land).

Appropriation		$500 00
EXPENDED.		
For examination of title:—		
Wm. V. Thompson	$40 00	
Retainer, Wm. B. Durant	375 00	
Total		$415 00
Balance unexpended		$85 00

WATER WORKS (Fresh Pond Reservoir).

Appropriation		$1,000 00
EXPENDED.		
For labor, as per pay-rolls	$420 50	
Services of architects, Olmsted Bros.	283 59	
Services of engineers, French & Bryant	196 33	
Teaming, sundry persons	97 50	
Total		$997 92
Balance unexpended		$2 08

WATER WORKS (Hobbs Brook Reservoir).

Appropriation			$13,500 00
RECEIVED.			
For damage		$65 00	
EXPENDED.			
For labor, as per pay-rolls		$1,411 00	
Building fence, James W. McCabe		84 75	
Carriage hire, Grafton E. Kirwin		27 00	
Cash for sundries, L. M. Hastings		5 24	
Damages, overflowing land at Kendal Green, E. J. Brown		65 00	
Examination of title, Clarence F. French		32 50	
Freight, Fitchburg Railroad Company		20 48	
Hardware, tools and repairs, and supplies:—			
John A. Green	$10 55		
J. A. Higgins	10 80		
D. B. Vittum	21 40		
		42 75	
Amounts carried forward		$1,688 72	$13,500 00

Amounts brought forward		$1,688 72	$13,500 00
Inspections: —			
Barge hire: —			
Elliott & Duvey, ...	$8 00		
John Nixon, ...	7 00		
Carriage hire: —			
Grafton E. Kirwin	275 50		
Ralph Smith & Co.	4 00		
Dinners, etc., M. R. Jones . . .	232 10		
		526 60	
Labor on pipe, Walter W. Field . .		13 56	
Land and damage: —			
Charles H. Brown	$650 00		
Charles O. Sargent	6,000 00		
		6,650 00	
Lease of ice privileges, Geo. M. Wilson		250 00	
For mason work, John Lally . .		11 85	
Pipe and cement, G. F. Frost . .		101 98	
Plumbing: —			
Fred. H. Kirwin	$67 29		
Mrs. George A. Thurston . . .	25 00		
		92 29	
Services of experts, etc: —			
A. Greenwood, M. D. . . .	$480 00		
Prof. I. N. Hollis	300 00		
Moses W. Kidder, M. D. . . .	25 00		
		805 00	
Services of: —			
Engineering Department . . .		500 00	
Law Department		1,000 00	
Stationery and printing: —			
Cambridge Chronicle Company . .	$5 75		
Caustic & Claflin	25 10		
		30 85	
Sundries		21 44	
Teaming, W. E Kingsbury . . .		171 88	
Use of tent, R. M. Yale & Co. . .		10 00	
Total			$11,874 17
Balance unexpended			$1,625 83

WATER WORKS (Maintenance, General Account).

Appropriation		$61,700 00

RECEIVED.

For contract	$250 00
Errors on pay-rolls	86 00
Grass	45 00
Hay	243 50
Labor and materials	574 85
Old boiler	80 00
Old building	19 00
Old iron	308 95
Old material	13 60
Pipe	10 47
Plants and shrubs	169 72
Sundries	4 00
Typewriter	25 00
	$1,830 09

EXPENDED.

For General Account:—			
Salaries of:—			
Superintendent, E. C. Brooks	$2,314 29		
Assistant Superintendent, Chas. B. Parker	1,440 00		
Treasurer of sinking funds, Wm. W. Dallinger	200 00		
Inspectors:—			
F. G. Davis	968 29		
I. H. Henderson	711 43		
C. E. McGuire	767 50		
Mechanic, B. P. Doe	168 56		
Keeper, at Hobbs Brook Reservoir:—			
J. E. Bryant	720 00		
Time-keeper, F. W. Cone	927 00		
Laborers, as per pay-rolls	21,359 42		
		29,576 49	
Advertising:—			
W. T. Billings	$15 00		
D. A. Buckley	5 25		
Cambridge Chronicle Company	7 00		
F. S. Hill	15 00		
Times Publishing Company	9 00		
		51 25	
Amounts carried forward		$29,627 74	$61,700 00

Amounts brought forward		$29,627 74	$61,700 00
For General Account: —			
Bicycle repairs, J. L. Moseley . .		10 25	
Board and room for the paper-hanger: —			
Mrs. Bryant		5 00	
Boots: —			
Leighton Bros. & Co.	$11 00		
P. H. Moriarty	10 00		
		21 00	
Carpentry: —			
E. W. Boynton & Co.	$269 48		
R. E. Glancy	13 46		
		282 94	
Carriage and wagon repairs: —			
Chapman Carriage Company . .	$102 25		
Lussier & Bonin	7 00		
Hugh Stewart & Co.	48 15		
Chas. Waugh & Co.	47 77		
		205 17	
Car tickets: —			
Boston Elevated Railway Company	$175 00		
Fitchburg Railroad Company . .	49 67		
		224 67	
Cash expended for sundries: —			
E. C. Brooks		23 60	
Directory, Sampson, Murdock & Co. .		5 00	
Drinking fountain, Samuel McCulloch		95 70	
Electrical work: —			
F. Bryant & Co.	$49 84		
Clark & Mills	30 00		
		79 84	
Empty caustic drums: —			
Curtis Davis & Co.		5 00	
Expressage: —			
Dodge's Express	$28 08		
Hatch & Co.	8 05		
Sundry persons	4 70		
		40 83	
Fuel: —			
Coleman Bros.	$18 65		
Richardson & Bacon . . .	5 25		
		23 90	
Gas: —			
Cambridge Gas Light Company .	$9 73		
Repairs	9 06		
		18 79	
Hardware, tools, machinery and repairs: —			
Peter Barclay Manufacturing Co. .	$10 80		
Geo. F. Blake Manufacturing Co. .	6 00		
Jos. Breck & Sons	29 80		
Amounts carried forward		$30,669 43	$61,700 00

Amounts brought forward		$30,669 43	$61,700 00
For General Account: —			
Hardware, tools, macninery and repairs: —			
Brock Bros.	6 07		
Burditt & Bynner	111 82		
Chandler & Farquhar	36 30		
Dodge, Haley & Co.	43 00		
C. H. Goldsmith	6 00		
Greene & Co.	9 17		
S. C. Higgins	5 70		
J. A. Higgins	35 08		
Jas. Maitland	129 36		
Robt. W. Neff	12 00		
Norwoood Eng. Company	11 60		
Walworth Manufacturing Company	17 15		
F. A. White	21 14		
Sundry persons	13 60		
		504 59	
Harness and repairs: —			
M. Cavanagh	$102 90		
H. & L. Chase	3 30		
A. D. Hayes	8 00		
		114 20	
Hay, grain, etc.: —			
J. Cushing & Co.	$594 37		
David O'Mara	17 44		
Geo. B. Pope & Co.	69 00		
L. G. Stone & Co.	18 75		
		699 56	
Horseshoeing: —			
Wm. Balmer	$71 75		
John A. Green	7 70		
John F. Gurry & Sons	52 75		
Thomas Smith	188 00		
Street Department	5 60		
Sundry persons	5 75		
		331 55	
Hose, etc., Boston Woven Hose Co.		74 60	
Ice, Fresh Pond Ice Company		7 09	
Laying granolithic: —			
W. A. Murtfeldt Company		20 00	
Lease of safe: —			
Cambridge Safe Deposit & Trust Co.		20 00	
Lumber and cement: —			
Geo J. Barker Lumber Company	$8 85		
Geo. W. Gale Lumber Company	58 26		
Wm. H. Wood & Co.	44 43		
		111 54	
Amounts carried forward		$32,552 56	$61,700 00

Amounts brought forward		$32,552 56	$61,700 00
For General Account: —			
Lunches: —			
Austin S. Corey	$1 50		
M. R. Jones	6 80		
		8 30	
Meters and repairs: —			
Hersey Manufacturing Company	$45 16		
Neptune Meter Company	60 08		
Henry R. Worthington	48 66		
		153 90	
Meter testing clamp: —			
Frederick W. Gow		68 00	
Motor, Cambridge Electric Light Co.		171 00	
Oil, Standard Oil Company		30 10	
Overcharge on water rates: —			
Masonic Hall Association		28 00	
Painting, Chas. A. Sawyer		119 58	
Payments in accordance with Acts of 1893, Chapter 352: —			
City of Waltham	$1,041 57		
Town of Belmont	510 56		
Town of Lexington	278 32		
Town of Lincoln	245 69		
Town of Weston	120 40		
		2,196 54	
Pipe and fittings: —			
Chapman Valve Manufacturing Co.	$63 53		
Coffin Valve Company	12 32		
Davis & Farnum Manufacturing Co.	54 18		
The A. P. Smith Manufacturing Co.	17 50		
Walworth Manufacturing Co.	31 51		
Sundry persons	3 10		
		182 14	
Plumbing: —			
Levi Hawkes	$7 31		
Fred. H. Kirwin	3 53		
		10 84	
Roof repairs, John J. Blevins		18 88	
Rope, James Baker		10 54	
Services: —			
Charles H. Morse, electrical expert	$200 00		
Olmsted Brothers, architects	960 00		
		1,160 00	
Stable fittings, W. A. Snow & Co.		21 45	
Amounts carried forward		$36,731 83	$61,700 00

Amounts brought forward		$36,731 83	$61,700 00
For General Account: —			
Stationery, printing, etc.: —			
Cambridge Chronicle Company .	$118 50		
Caustic & Claflin	62 16		
Thorp & Martin Company . .	210 63		
Sundry persons	7 54		
		398 83	
Sundries		67 94	
Teaming, sundry persons . . .		408 99	
Telephone rent and tolls . . .		181 40	
Testing pipes, E. B. McNaughton .		20 80	
Typewriter: —			
Wyckoff, Seamans & Benedict .		94 50	
Office expenses: —			
Salaries of: —			
Water Registrar, W. H. Harding .	$2,414 67		
Clerks; —			
H. L. Lincoln	1,171 63		
H. F. Milligan	772 50		
G. K. Dame	618 00		
M. M. Robbins	618 00		
		5,594 80	
Car tickets: —			
Boston Elevated Railway Company		75 00	
Desk, Derby Desk Company . .		18 00	
Stationery, printing, etc.: —			
Cambridge Chronicle Company .	$31 00		
Cotton & Gould	43 75		
Library Bureau	10 05		
Thorp & Martin Co.	140 20		
Sundry persons	22 05		
		247 05	
Subscriptions		5 00	
Telephone rent and tolls . . .		77 25	
Pumping station: —			
Salaries of: —			
Engineer, E. I. Harris . . .	$1,779 94		
Assistant Engineer, W. H. Blaisdell	1,028 57		
Laborers, as per pay-rolls . . .	5,222 86		
		8,031 37	
Bricks, N. M. Cofran & Co. . . .		6 00	
Carpentry, E. W. Boynton & Co. .		11 98	
Current: —			
Cambridge Electric Light Company		21 53	
Amounts carried forward		$51,992 27	$61,700 00

Amounts brought forward		$51,992 27	$61,700 00
For General Account: —			
Electrical supplies: —			
Pettingell, Andrews Company . .	$28 13		
Sundry persons	6 09		
		34 22	
Pumping station: —			
Engine and boiler supplies: —			
American Steam Gauge Company .	$14 25		
Geo. F. Blake Manufacturing Co. .	23 60		
F. W. Bradley	10 28		
Chapman Valve Manufacturing Co.	19 05		
A. W. Chesterton & Co. . . .	70 91		
Grundy Brass Works . . .	43 44		
Keystone Lubricating Co. . .	79 32		
New England Lubricant Co. . .	27 50		
Mason Regulator Company . .	16 50		
W. A. Morrison	74 69		
Roberts Iron Works Company .	12 98		
Stovene Manufacturing Company .	14 55		
Walworth Manufacturing Co. .	50 55		
Watts Regulator Company . .	7 50		
Sundry persons	17 14		
		482 26	
Expressage: —			
Elliott & Duvey	$6 75		
Hatch & Co.	12 78		
Sundry persons	1 15		
		20 68	
Fuel: —			
Baker-Hunnewell Company . .	$528 60		
Coleman Brothers	4,477 94		
Mitchell Coal and Coke Company .	998 28		
Richardson & Bacon . . .	580 68		
Wellington-Wild Coal Company .	297 56		
		6,883 06	
Furniture, Worcester Brothers .		6 25	
Hardware, tools and repairs, and supplies: —			
Burditt & Bynner	$38 46		
Jas. Maitland	28 34		
Sundry persons	15 16		
		81 96	
Hose, etc., Boston Woven Hose Co. .		97 68	
Ice, Fresh Pond Ice Company . .		23 55	
Labor on track, Walter W. Field .		18 92	
Lumber, Wm. H. Wood & Co. . .		10 44	
Amounts carried forward		$59,651 29	$61,700 00

Amounts brought forward		$59,651 29	$61,700 00
For General Account: —			
Oil: —			
Standard Oil Company . . .	$18 58		
W. A. Wood & Co. . . .	155 78		
		174 36	
Painting, Chas. A. Sawyer . . .		10 63	
Refreshments, M. R. Jones . .		45 17	
Rent, E. A. Paine		433 29	
Repairing gutters, John J. Blevins .		46 90	
Sealing: —			
Sealer of weights and measures .		7 53	
Sundries		5 17	
Thermometers, J. S. F. Huddleston .		5 25	
Use of pump, The Fairbanks Company		8 00	
Stony Brook Reservoir: —			
Salary of gateman, Silas Baxter .		767 00	
Fuel, G. F. Frost		19 13	
Hardware, tools and supplies: —			
American Steel and Wire Company,	$50 44		
J A. Higgins	6 27		
Morss & Whyte	127 40		
Sundry persons	5 30		
		189 41	
Hay, grain, etc.: —			
Jacob F Hagar	$4 20		
George B. Pope & Co. . . .	51 75		
		55 95	
Horseshoeing, Thomas Evans . .		18 05	
Lumber, Buttrick Lumber Company .		55 35	
Posts, James B. Wood . . .		42 84	
Repairing roof, G. H. Carr . .		25 00	
Sundries		19 44	
Telephone rent and tolls . . .		70 72	
Teaming, sundry persons . . .		26 33	
Water rates, Waltham Water Works		14 00	
Total			$61,690 81
Balance unexpended			$ 9 19

SUMMARY: EXPENDED.

For General Account	$37,904 29
Office expenses	6,017 10
Pumping Station	16,466 20
Stony Brook Reservoir	1,303 22
Total	$61,690 81

WATER WORKS (Interest on Water Loan).

Appropriation		$132,094 00
EXPENDED.		
For interest on water debt	$130,674 00	
Total		$130,674 00
Balance unexpended		$1,420 00

WATER WORKS (Rates, Fines, Etc.)

RECEIVED.		
From sundry persons, for rates, fines, etc.		$311,536 40
EXPENDED.		
For interest on water debt	$130,674 00	
Maintenance	59,374 25	
Abatement of rates	4,978 50	
Refund of rates,	2,791 15	
Sinking Fund requirements	113,718 50	
Total		$311,536 40

Abatements

Appropriation	$5,000 00
EXPENDED.	
For abatements allowed on water rates	4,978 50
Balance unexpended	$21 50

Refunds.

Appropriation	$3,000 00
EXPENDED.	
For refund on water rates	2,791 15
Balance unexpended	$208 85

WATER WORKS (Sinking Fund).

Appropriation	$113,718 50
EXPENDED.	
Paid to Trustees of Sinking Fund of Water Works	$113,718 50

WATER WORKS (Supplies).

Appropriation		$6,500 00
RECEIVED.		
For supply pipes, etc.	$6,791 03	
EXPENDED.		
For labor, as per pay-rolls	$2,348 50	
Superintendent of supplies, B. P. Doe	820 00	
Car tickets, Boston Elevated Railway Company	25 00	
Damages, Otis E. Merrifield	215 00	
Drain work, Samuel McCulloch	11 75	
Meters, Hersey Manufacturing Co.	25 20	
Paving rammer, Perrin, Seamans & Co.	7 20	
Pipe and fittings, Walworth Manufacturing Company	2,288 68	
Sundries	4 81	
Valves, Chapman Valve Manufacturing Company	599 92	
Total		$6,346 06
Balance unexpended		$153 94

WATER WORKS (Supplies).

Abatements.

Appropriation	$200 00
EXPENDED.	
For abatement of supply bills	198 77
Balance unexpended	$1 23

CAMBRIDGE WATER WORKS.

In account with the City of Cambridge for the year ending November 30, 1899.

RECEIPTS AND EXPENDITURES.

Balance in the City Treasury to the credit of the Water Works, Nov. 30, 1898	$24,984 21		Expended for		
Less deficit in Maintenance Account	3,526 22		General Construction		$33,364 00
		$21,457 99	Fresh Pond Land		415 00
Received from sale of bonds		23,000 00	Fresh Pond Reservoir		997 92
Other revenue on Construction Account		1,360 00	Hobbs Brook Reservoir		11,874 17
Maintenance Account: —			Maintenance		320,397 79
General revenue		1,830 09			$367,048 80
Rates, fines, etc.		311,536 40	Less, deficit in Maintenance Account for 1898	$3,526 22	
Supplies		6,791 03	Deficit for 1899	240 27	
			Total deficit	$3,766 49	
			Balance to the credit of Construction Account	2,693 12	
			Balance due City of Cambridge		1,073 37
		$365,975 51			$365,975 51

RECAPITULATION.

City Department Accounts.	Receipts.	Appropriations.	Expended.	Balances Unexpended.
Assessors' Department		$13,500 00	$13,489 10	$10 90
Auditing Department		3,500 00	3,470 88	29 12
Bridge Department	$713 43	16,500 00	15,967 99	532 01
Cambridge Bridge	4,000 00	*49,464 59	44,681 73	4,782 86
Cemetery Department	16,133 90	21,500 00	19,910 23	1,589 77
City Clerk Department	2,401 20	7,700 00	7,694 84	5 16
Classified Index		600 00		600 00
Printing Town Records		1,080 00	177 50	902 50
Russell Memorial Volume		360 00	3 50	356 50
City Messenger Department		2,700 00	2,555 94	144 06
Civil Service Department		250 00	247 05	2 95
Clerk of Committees Department		4,000 00	3,968 90	31 10
Contingent Fund	705 89	13,292 41	13,099 91	192 50
Election Expenses: —				
City Clerk		5,100 00	5,100 00	
Registrars of Voters		3,500 00	3,470 78	29 22
Superintendent of Public Buildings		1,800 00	1,378 07	421 93
Engineering Department	500 00	11,000 00	10,986 75	13 25
Assessors' Plans		300 00	238 10	61 90
Executive Department		5,200 00	5,182 88	17 12
Filling City Lands		*1,632 25	1,624 80	7 45
Fire Department	187 20	85,000 00	84,900 23	99 77
Health Department		19,850 00	19,754 04	95 96
Inspection of Milk and Vinegar	151 00	1,500 00	1,500 00	
Inspection of Provisions, etc.		800 00	793 60	6 40
Inspection of Wires	7 86	14,500 00	14,499 98	0 02
Interest	9,547 76	144,344 00	139,432 86	4,911 14
Lamp Department	42 75	72,000 00	71,980 42	19 58
Land Damages		*16,044 53	15,490 43	554 10
Law Department	1,000 00	5,632 59	5,632 35	24
Overseers of the Poor Department: —				
Almshouse	845 71	22,000 00	21,918 08	81 92
Farm	6,049 47	5,300 00	5,260 91	39 09
House Offal	6,997 40	26,000 00	25,958 65	41 35
Outside Aid	5,730 49	50,250 00	50,207 51	42 49
Salary of City Physician		1,500 00	1,500 00	
Park Department: —				
Construction and Lands	7,406 43	*133,020 51	105,438 81	27,581 70
Maintenance	21 60	14,498 60	14,497 01	1 59
Interest	126 39	39,280 00	38,880 00	400 00
Sinking Fund		16,250 00	16,250 00	
Plumbers' Examiners' Department	28 50	100 00	98 75	1 25
Police Department	5,884 96	117,000 00	116,998 35	1 65
Public Library: —				
Current Expenses	4,627 70	20,000 00	19,998 50	1 50
East Cambridge Branch		1,230 00	1,226 17	3 83
Public Property: —				
City Buildings, Care and Repairs	1,686 83	18,700 00	18,459 67	240 33
"Furnishings," City Treasurer's Safe		700 00	700 00	
Incidentals		5,450 00	5,449 79	21
Land for Schoolhouse, Ward 1		*13,000 00		13,000 00
Heat. app., Morse and Putnam Schools		*32,000 00	31,909 94	90 06
Roberts Schoolhouse		*32,916 40	32,770 52	145 88
Ellis Schoolhouse		*21,219 80	21,210 16	9 64
New Latin Schoolhouse		*63,669 22	63,493 10	176 12
Addition to Peabody School		*17,458 24	17,386 18	72 06
Furnishings, Ellis Schoolhouse		*3,000 00	2,873 59	126 41
" Latin Schoolhouse		*25,500 00	23,659 96	1,840 04
" Peabody Schoolhouse		*2,300 00	2,253 83	46 17
" Roberts Schoolhouse		*3,000 00	2,928 79	71 21
Rebuilding Harvard School	204 30	*47,000 00	23,765 48	23,234 52
Remodelling Otis School		*8,000 00	7,966 00	34 00
Rifle Range		800 00	576 40	223 60
Schoolhouses, Care and Repairs		77,100 00	77,100 00	
School Department: —				
Care of Truants		2,500 00	1,831 34	668 66
Flags		250 00	249 57	43
Incidentals		1,600 00	1,574 90	25 10
Salaries	5,672 15	311,050 00	311,019 87	30 13
Text-Books and Supplies	392 87	20,700 00	20,697 21	2 79
Amounts carried forward	$81,065 79	$1,676,993 14	$1,593,341 90	$83,651 24

* Appropriation provided for by a Loan.

RECAPITULATION — Concluded.

City Department Accounts.	Receipts.	Appropriations.	Expended.	Balances Unexpended.
Amounts brought forward	$81,065 79	$1,676,993 14	$1,593,341 90	$83,651 24
Sealer of Weights and Measures	517 29	1,645 00	1,644 02	98
Sewer Department: —				
Improved Sewerage		*100,000 00	42,989 24	57,010 76
Construction, General	8,791 63	24,700 00	23,827 69	872 31
Maintenance	389 49	18,400 00	18,179 35	220 65
Sinking Funds: —				
Clay Lands		4,000 00	4,000 00	
General		106,750 00	106,750 00	
Harvard Bridge		8,000 00	8,000 00	
Soldiers' Relief	3,152 00	2,000 00	1,693 50	306 50
State Aid	15,511 58	26,000 00	25,524 77	475 23
Stationery and Printing	923 23	3,000 00	2,983 88	16 12
Street Department: —				
Bridges		2,400 00	2,370 00	30 00
Cleaning Streets		35,750 00	35,749 99	01
Collection of Ashes		22,000 00	22,000 00	
Construction, Green Street		*5,000 00		5,000 00
Maintenance	3,677 40	81,627 40	81,553 16	74 24
New Streets, Clay Land District		*21,000 00	11,906 84	9,093 16
Paving, Edgestones and Sidewalks	12,768 02	22,500 00	22,434 52	65 48
Paving, Crossings, Repairs, etc		10,000 00	9,999 64	36
Rebuilding Harvard Square	3,365 53	3,365 53	3,364 39	1 14
" Portland and Prospect Sts	46,088 52	45,089 92	33,996 36	11,093 56
Watering Streets	17,614 29	25,500 00	25,497 99	2 01
Treasury Department	2,366 19	14,700 00	14,699 53	47
	$196,230 96	$2,260,420 99	$2,092,506 77	$167,914 22

* Appropriation provided for by a Loan.

Water Department Accounts.	Receipts.	Appropriations.	Expended.	Balances Unexpended.
Water Works Department:—				
Construction (General Account)	$1,295 00	*$33,500 00	$33,364 00	$136 00
Construction (Fresh Pond Land)		*500 00	415 00	85 00
Construction (Fresh Pond Reservoir)		*1,000 00	997 92	2 08
Construction (Hobbs Brook Reservoir)	65 00	*13,500 00	11,874 17	1,625 83
Maintenance (General Account)	1,830 09	61,700 00	61,690 81	9 19
Interest on Water Loan		132,094 00	130,674 00	1,420 00
Rates, Fines, etc	311,536 40			
Rates, Fines, etc. (Abatements)		5,000 00	4,978 50	21 50
Rates, Fines, etc. (Refunds)		3,000 00	2,791 15	208 85
Sinking Funds		113,718 50	113,718 50	
Supplies	6,791 03	6,500 00	6,346 06	153 94
Supplies (Abatements)		200 00	198 77	1 23
	$321,517 52	$370,712 50	$367,048 88	$3,663 62

* Appropriation provided for by a Loan.

CITY TREASURY.

DR.

To Cash in Treasury, December 1, 1898	$206,150 28	
Receipts as shown in the foregoing Statement (City Department Accounts)	196,230 96	
Receipts as shown in the foregoing Statement (Water Department Accounts)	321,517 52	
Amount received from Collector of Taxes for 1899	1,332,340 97	
Amount received from Collector of Taxes for other years	243,420 31	
Betterments	1,559 80	
Cemetery Fund	3,136 00	
City Lands	25,000 00	
Commissioners of Sinking Funds	8,000 00	
Loan, Cambridge Bridge	50,000 00	
Loan, City	77,000 00	
Loan, Clay Lands	17,000 00	
Loan, Improved Sewerage	42,000 00	
Loan, Parks	100,000 00	
Loan, Schoolhouse	55,000 00	
Loan, Street	5,000 00	
Loan, Temporary	550,000 00	
Loan, Water	23,000 00	
Park Betterment Lien	3,892 35	
Premium Account	23,625 00	
Tax, Corporation	98,405 61	
Tax, National Bank	15,931 68	
Tax, Street Railway	47,569 33	
		$3,445,779 81

CR.

By Amount expended as shown in the foregoing Statement (City Department Accounts)	$2,092,506 77	
Amount expended as shown in the foregoing Statement (Water Department Accounts)	367,048 88	
Abatements (Taxes)	35,317 61	
Cemetery Fund	3,136 00	
Loan, Street Widening	8,000 00	
Loan, Temporary	550,000 00	
Tax, County	87,085 65	
Tax, Metropolitan Sewer	74,763 08	
Tax, National Bank	7,681 26	
Tax, State	48,195 00	
		$3,273,734 25
Balance in Treasury		$172,045 56

SCHEDULE OF REAL ESTATE OWNED BY THE CITY OF CAMBRIDGE, AS SHOWN ON THE ASSESSORS' BOOKS, NOVEMBER 30, 1899.

Cambridge Cemetery :—			
60 1-10 acres of land		$60,000 00	
1 house		2,500 00	
			$62,500 00
Cambridge Public Library :—			
141,666 feet of land		70,000 00	
Library building		116,000 00	
			186,000 00
Fire Department :—			
Hook and Ladder No. 2, Portland Street	$12,000 00		
11,931 feet of land	3,000 00		
		15,000 00	
Engine House No. 5, junction Cambridge and Hampshire Streets	10,000 00		
6,000 feet of land	5,000 00		
		15,000 00	
Engine House, south side Main, corner Deacon Street	12,000 00		
9,400 feet of land	7,300 00		
		19,300 00	
Engine House, Massachusetts Avenue	23,000 00		
9,532 feet of land	6,000 00		
		29,000 00	
Engine House No. 4, and stable, North Avenue	7,000 00		
6,316 feet of land	3,000 00		
		10,000 00	
Engine House No. 6, River Street	12,000 00		
4,994 feet of land	2,500 00		
		14,500 00	
Engine House, east side Lexington Avenue	16,000 00		
15,262 feet of land	4,000 00		
		20,000 00	
Engine House, Massachusetts Avenue	26,000 00		
10,000 feet of land	8,000 00		
		34,000 00	
Engine House, Third Street	17,500 00		
10,100 feet of land	5,500 00		
		23,000 00	
			179,800 00
Overseers of the Poor Department :—			
14 242-1000 acres of land		15,000 00	
Almshouse buildings		25,000 00	
			40,000 00
Public buildings and lands :—			
City Hall, Massachusetts Avenue	200,000 00		
47,878 feet of land	72,000 00		
		272,000 00	
Amounts carried forward		$272,000 00	$468,300 00

Amounts brought forward		$272,000 00	$468,300 00
Public buildings and lands : —			
Ward One Building, Mt. Auburn St.	$60,000 00		
16,153 feet of land	16,000 00		
		76,000 00	
Ward Four Building, Green Street .	50,000 00		
13,028 feet of land	10,500 00		
		60,500 00	
Police Station, Fourth Street . .	20,000 00		
4,220 feet of land	2,100 00		
		22,100 00	
Street Department :—			
Stables, sheds and scales, Hampshire Street	16,000 00		
72,661 feet of land	30,000 00		
		46,000 00	
City Stables, west side Raymond St.	27,000 00		
272,670 feet of land	11,000 00		
		38,000 00	
Park Department : —			
Park, Boylston, Mt. Auburn and Winthrop Streets, 10,236 feet of land .		10,000 00	
Park, south side Broadway, 107,181 feet of land		54,000 00	
Park, Hastings Square, 30,000 feet of land		9,000 00	
Park, Dana Square, 33,531 feet of land		12,000 00	
Park, Pleasant Street, 1,372 feet of land		1,000 00	
Park, Pleasant and River Streets, 1,569 feet of land		1,200 00	
Fort Washington, east side Waverly Street, 42,123 feet of land . .		8,000 00	
Mill Pond Property, north side River Street, west side Blackstone Street, 72,700 feet		29,000 00	
Lot east side Portland Street, 18,011 ft.		5,500 00	
Lot east side Norfolk Street, 39,600 ft		12,000 00	
38 lots, Western Avenue, Putnam Avenue, Bancroft, Gilmore and Montague Streets, 119,145 feet . .		27,000 00	
Lot, Second Street, 26,357 feet . .		5,200 00	
Lot west side Reed Street, 1,500 feet		100 00	
Lot, Walden Street, 16,365 feet . .		1,600 00	
Flats south side Main Street, 86,500 ft.		7,600 00	
Common, Garden St., Massachusetts Ave. and Waterhouse St., 370,785 ft.		200,000 00	
Park, Massachusetts Ave., Kirkland and Cambridge Sts , 33,357 feet .			
Park, Massachusetts Avenue and Harvard Square, 23,074 feet . . .		77,000 00	
Park, Massachusetts Ave. and Holmes Place, 20,956 feet			
Amounts carried forward		$974,800 00	$468,300 00

Amounts brought forward		$974,800 00	$468,300 00
Park Department: —			
Park, Rindge Avenue and Groveland Street, 501,729 feet		30,047 00	
Lot west side Blackstone Street, Western Ave. and Ampere St., 19,934 ft.		5,600 00	
Mt Auburn Street, 60,508 feet . .		9,000 00	
Ward 2, Charles River Parkway 453,475 feet		22,700 00	
Ward 3, Charles River Parkway 359,300 feet		70,000 00	
Ward 4, Charles River Parkway 2,180,889 feet		86,500 00	
Ward 2, Cambridge Field, Shelter House	$28,000 00		
528,154 feet of land	22,000 00		
		50,000 00	
Lot, south side Deacon Street, 12,210 feet		1,000 00	
Triangular lot, Massachusetts Avenue and Arrow Street, 872 feet . . .		800 00	
Burial ground, Massachusetts Avenue and Garden Street, 85,858 feet . .			
Triangular lot, Chauncey and Garden Streets, 3,189 feet		2,000 00	
Buildings and lands, north side Bridge .		1,000 00	
			1,253,447 00
			$1,721,747 00

SCHOOLHOUSES AND LANDS.

Ward One.

New Latin School	$150,000 00		
English High School, Broadway . .	220,000 00		
154,125 feet of land	84,700 00		
		$454,700 00	
Washington Grammar, Brattle Street .	30,000 00		
14,951 feet of land	10,000 00		
		40,000 00	
Corlett Grammar, Holworthy Street .	3,000 00		
10,000 feet of land	1,200 00		
		4,200 00	
Manual Training School, Broadway Irving and Felton Streets: —			
Land, 81,128 feet	44,000 00		
Building and appliances	56,000 00		
		100,000 00	
Agassiz Primary, Sacramento Street .	18,000 00		
19,689 feet of land	8,000 00		
		26,000 00	
Cushing Primary, Cushing Street . .	3,000 00		
14,789 feet of land	1,500 00		
		4,500 00	
Dunster Primary, Concord Avenue .	4,000 00		
10,000 00 feet of land	3,000 00		
		7,000 00	
Amounts carried forward		$636,400 00	$1,721,747 00

Amounts brought forward		$636,400 00	$1,721,747 00
Holmes Primary, Hilliard Street . .	$6,000 00		
11,182 feet of land	5,600 00		
		11,600 00	
Lowell Primary, Lowell Street . .	7,000 00		
12,033 feet of land	3,600 00		
		10,600 00	
Quincy Primary, Mason Street . .	10,000 00		
8,469 feet of land	8,400 00		
		18,400 00	
Riverside Primary, Putnam Avenue .	5,000 00		
11,198 feet of land	3,000 00		
		8,000 00	
Russell School, Larch Street . . .	40,000 00		
33,073 feet of land	6,000 00		
		46,000 00	
Ward Two.			
Latin High, Fayette Street . . .	$40,000 00		
37,828 feet of land	15,000 00		
		55,000 00	
Old Latin School, Lee Street . . .	10,000 00		
10,100 feet of land	5,000 00		
		15,000 00	
Wellington Training, Columbia Street	16,000 00		
18,870 feet of land	5,700 00		
		21,700 00	
Allston Grammar, Boardman Street .	18,000 00		
15,193 feet of land	4,600 00		
		22,600 00	
Harvard Grammar, Inman Street . .	40,000 00		
20,494 feet of land	12,000 00		
		52,000 00	
Bridge Primary, Pioneer Street . .	500 00		
4,646 feet of land	1,400 00		
		1,900 00	
Dana Primary, Centre Street . . .	2,000 00		
14,317 feet of land	4,300 00		
		6,300 00	
Felton Primary, Amory Street . .	6,000 00		
15,090 feet of land	4,500 00		
		10,500 00	
Gannett (old) Primary, Columbia Street	2,000 00		
8,803 feet of land	2,500 00		
		4,500 00	
Gannet (new) Primary, Jefferson Street	12,000 00		
15,434 feet of land	3,000 00		
		15,000 00	
Sargent Primary, Broadway . . .	3,000 00		
9,995 feet of land	4,000 00		
		7,000 00	
Stearns Primary, Harvard Street . .	3,000 00		
10,050 feet of land	5,000 00		
		8,000 00	
Parker Primary, south side Broadway .	15,000 00		
12,319 feet of land	7,000 00		
		22,000 00	
Amounts carried forward		$972,500 00	$1,721,747 00

Amounts brought forward		$972,500 00	$1,721,747 00
Roberts School, Harvard Street . .	$48,000 00		
16,109 feet of land	7,200 00		
		55,200 00	
Ward Three.			
Putnam Grammar, Fourth and Otis Streets	$60,000 00		
14,400 feet of land	9,800 00		
		69,800 00	
Thorndike Grammar, Thorndike Street	30,000 00		
10,027 feet of land	4,000 00		
		34,000 00	
Gore Primary, Gore Street . . .	25,000 00		
9,900 feet of land	4,000 00		
		29,000 00	
Lassell Primary, Charles Street . .	8,000 00		
10,000 feet of land	3,000 00		
		11,000 00	
Otis Primary, Otis Street . . .	12,000 00		
8,270 feet of land	4,000 00		
		16,000 00	
Taylor Schoolhouse	36,000 00		
23,592 feet of land	6,000 00		
		42,000 00	
Ward Four.			
Webster Grammar, Upton Street . .	$50,000 00		
25,839 feet of land	9,000 00		
		59,000 00	
Boardman Primary, Winsor Street .	12,500 00		
10,018 feet of land	4,000 00		
		16,500 00	
Tarbell Primary, Grigg Street . .	8,000 00		
19,500 feet of land	4,000 00		
		12,000 00	
Willard Primary, Lake Street . .	20,000 00		
20,079 feet of land	5,000 00		
		25,000 00	
Morse School House, Allston and Brookline Streets	73,000 00		
25,650 feet of land	7,000 00		
		80,000 00	
Ward Five.			
Peabody Grammar, Linnæan Street .	$27,000 00		
21,813 feet of land	8,700 00		
		35,700 00	
Shepard Grammar, Massachusetts Ave.	20,000 00		
14,755 feet of land	7,000 00		
		27,000 00	
Amounts carried forward		$1,484,700 00	$1,721,747 00

Amounts brought forward		$1,484,700 00	$1,721,747 00
Reed Primary, Reed Street . . .	$4,000 00		
12,000 feet of land	1,200 00		
		5,200 00	
Wyman Primary, Rindge Avenue . .	6,000 00		
14,347 feet of land	4,000 00		
		10,000 00	
Sleeper School, Dudley Street . .	29,000 00		
21,284 feet of land	5,000 00		
		34,000 00	
Ellis School, Norris Street . . .	50,000 00		
25,700 feet of land	5,000 00		
		55,000 00	
			1,588,900 00
Sewer Department: —			
23,707 feet of land, Pilgrim Street .	$5,900 00		
Stables, shed, house and building .	4,100 00		
			10,000 00
Water Works: —			
House, shop and stables, south side Concord Avenue	4,000 00		
27 33-100 acres of land . . .	16,700 00		
		20,700 00	
Land, south side Concord Avenue, 5-8 acre		300 00	
Land, east side Woodlawn Avenue, 15,735 feet		800 00	
Lot, rear of Grove Street, 272,800 feet		2,000 00	
Lot, south side Concord Avenue, 99,000 feet		1,000 00	
Land, south side Concord Avenue, 11,220 feet		100 00	
Two lots, south side Concord Avenue, 219,400 feet		2,200 00	
Gate-house lot, Concord Avenue, 43,560 feet		400 00	
Lot, south side Concord Avenue, 24,100 feet		300 00	
Fresh Pond Lane, 11 1-4 acres of land		11,000 00	
Kingsley Park, Fresh Pond Lane, 309,336 feet		8,000 00	
Lot, rear Fresh Pond Lane, 364,608 ft.		3,500 00	
Lot, Woodlawn Avenue, 107,616 feet .		8,000 00	
Lot, Woodlawn Avenue, 26,989 feet .		1,600 00	
Lot, rear Fresh Pond Lane, 239,541 ft.		5,000 00	
Lot, Woodlawn Avenue, 91,040 feet .		2,000 00	
Lot, Holworthy Street, 18,480 feet .			
Lot, south side Huron Avenue, 22,348 feet		700 00	
Amounts carried forward		$67,600 00	$3,320,647 00

Amounts brought forward		$67,600 00	$3,320,647 00
Water Works: —			
Lot, east side Cushing Street, 41,053 feet		800 00	
Lot, Cushing Street, corner Woodland Avenue, 95.482 feet		2,000 00	
Lot, Woodland Avenue, 24,096 feet .		1,900 00	
Lot, east side Cushing Street, 639,550 feet		4,000 00	
Two lots, near Fresh Pond and Adams Place, 110,891 feet		1,000 00	
Land, Adams Place, 160,597 feet .		1,400 00	
Lot, Woodlawn Avenue, 25,216 feet of land		1,200 00	
Land, Woodlawn Avenue, 133,336 feet		13,700 00	
Gravel pit, south side Concord Avenue, 397,417 feet		3,000 00	
190,500 feet of land, Huron Avenue .		4,300 00	
Lot, south side Huron Avenue, 91,112 feet		500 00	
Near Concord Avenue, 4½ acres .		5,000 00	
Adams Place, 419,222 feet of land .		10,000 00	
South side Concord Avenue, 10,805 feet of land		500 00	
South side Concord Avenue, 32,425 feet of land		700 00	
South side Concord Avenue, 62,000 feet of land		1,200 00	
Lot, Huron Avenue, 1¾ acres . .		1,000 00	
Concord Avenue, 294,000 feet of land		3,000 00	
Tudor Park, near Concord Avenue, 57,312 feet of land			
Pumping Station, Worthington Street	50,000 00		
Dwelling house	2,000 00		
90,414 feet of land	18,000 00		
		70,000 00	
One house and stable, Lexington Avenue, Lake View Avenue, and Vassal Lane	7,300 00		
88,077 feet of land	11,000 00		
		18,300 00	
Reservoir, Reservoir Street, 91,003 feet of land		27,000 00	
Two houses, stable and sheds and building, south side Auburn Street,	5,700 00		
33,847 feet of land	6,600 00		
		12,300 00	
Amounts carried forward		$250,400 00	$3,320,647 00

Amounts brought forward	$250,400 00	$3,320,647 00
Water Works: —		
Lot, Grove Street, 150,000 feet . .	1,500 00	
Land and buildings, Grove Street, 519,000 feet	11,000 00	
Lot, Fresh Pond Lane, corner Huron Avenue, 46,479 feet	6,900 00	
Lot, Fresh Pond Lane, 209,500 feet .	20,000 00	
		289,800 00
Total		$3,610,447 00

EXEMPTED PROPERTY.

The following is a schedule of property used for religious, charitable and educational purposes, and exempt from taxation by law, not including that owned by the City of Cambridge, as shown on the Assessors' Books, November 30, 1899.

Ward One.

Christ Church, Episcopal, Garden St.: —		
Church	$18,000 00	
22,701 feet of land	17,000 00	
		$35,000 00
First Parish Church, Unitarian: —		
Church, Massachusetts Avenue .	20,000 00	
14,764 feet of land	29,000 00	
		49,000 00
Cambridge Social Union: —		
Personal property	1,500 00	
House, No. 42 Brattle Street . .	5,000 00	
13-22 of hall	7,000 00	
9,030 feet of land	9,000 00	
		22,500 00
Epworth Methodist Episcopal Church: —		
Church, Massachusetts Avenue . .	80,000 00	
11,248 feet of land	10,000 00	
		90,000 00
Old Cambridge Baptist Society: —		
Church, Massachusetts Avenue and Harvard Street	80,000 00	
34,573 feet of land	34,000 00	
		114,000 00
Shepard Congregational Society: —		
Church, Garden Street . . .	110,000 00	
34,353 feet of land	34,000 00	
		144,000 00
St. Peter's Roman Catholic Church: —		
Concord Avenue	45,000 00	
33,700 feet of land	10,000 00	
		55,000 00
Amount carried forward		$509,500 00

Amount brought forward		$509,500 00
St. Peter's Parish Hall Corp'n : —		
Stores and hall, 70 Concord Avenue .	$36,500 00	
11,850 feet	3,500 00	
		40,000 00
St. Paul's Roman Catholic Church : —		
Mount Auburn Street	30,000 00	
11,216 feet of land	11,000 00	
		41,000 00
St. Paul's Catholic School Association : —		
Personal property	1,500 00	
School building	55,000 00	
House, Arrow and Mount Auburn Streets	8,000 00	
31,800 feet of land	19,000 00	
		83,500 00
Cambridge Hospital : —		
Personal property	181,184 59	
Buildings, Mount Auburn Street .	94,000 00	
411,452 feet of land	123,000 00	
		398,184 59
Cambridge Home for Aged People, Mount Auburn Street : —		
Building	$60,000 00	
42,975 feet of land	20,000 00	
		80,000 00
Longfellow Memorial Association : —		
Personal Property	16,702 89	
Park, South side Brattle Street, 93,618 feet	56,000 00	
		72,702 89
Episcopal Theological School, Trustees of : —		
Personal property	127,426 06	
Chapel, seminary, dormitories, Brattle and Mason Streets, and Hastings Avenue	238,471 82	
		365,897 88
Avon Home, Mt. Auburn Street : —		
Building	22,000 00	
69,470 feet of land	20,000 00	
Personal Property	61,469 87	
		103,469 87
Holy Ghost Hospital for Incurables : —		
Building, Cambridge Street . .	35,500 00	
209,126 feet of land	54,500 00	
		90,000 00
Radcliffe College : —		
Personal property	509,556 21	
Five houses, laboratory, schoolhouse and gymnasiums, Garden, Brattle, Mason and James Streets . .	108,200 00	
Amount carried forward		$1,784,255 23

Amount brought forward		$1,784,255 23	
Radcliffe College: —			
108,262 feet of land	$105,800 00		
		723,556 21	
The Corporation of the New Church Theological School: —			
Personal property	72,824 00		
Two houses and stable, 42–48 Quincy Street	16,000 00		
81,450 feet of land	65,000 00		
		153,824 00	
President and Fellows of Harvard College: —			
Personal property	7,793,709 37		
Dormitories, chapels, laboratories, museums, lecture rooms and houses, including Ward Five property	3,221,900 00		
		11,015,609 37	
Commonwealth of Massachusetts: —			
Metropolitan Park, 29 acres and 231,686 feet		48,200 00	
			$13,725,444 81
Ward Two.			
Baptist Church, Trustees of funds of: —			
Chapel, Hampshire Street . . .	$3,000 00		
2,500 feet of land	800 00		
		$3,800 00	
Broadway Baptist Church: —			
Church, west side Boardman Street .	30,000 00		
11,620 feet of land	8,000 00		
		38,000 00	
Cambridgeport Unitarian Society: —			
Church, north side Austin Street .	18,000 00		
13,116 feet of land	8,000 00		
		26,000 00	
Harvard Street Methodist Episcopal Society: —			
Church, north side Harvard Street .	22,000 00		
10,030 feet of land	8,000 00		
		30,000 00	
St. Paul's African M. E. Church: —			
Church, north side of Hastings Street	2,000 00		
5,386 feet of land	2,000 00		
		4,000 00	
Hope Congregational Church: —			
Church, north side Harvard Street .	8,000 00		
6,000 feet of land	3,000 00		
		11,000 00	
Amounts carried forward		$112,800 00	$13,725,444 81

Amounts brought forward		$112,800 00	$13,725,444 81
First Evangelical Congregational Society: —			
Church, west side Prospect Street .	$40,000 00		
19,513 feet of land	12,000 00		
		52,000 00	
First Free Baptist Church: —			
Church, north side Harvard Street .	9,000 00		
6,250 feet of land	4,700 00		
		13,700 00	
First Free Baptist Church: —			
Church, north side Hampshire Street,	3,000 00		
3,851 feet of land	1,500 00		
		4,500 00	
First Universalist Society of Cambridge: —			
Church, east side Inman Street . .	20,000 00		
15,312 feet of land	11,300 00		
		31,300 000	
St Mary's Parochial School: —			
Church, west side Norfolk, corner Harvard Street	45,000 00		
Girls' School, south side Harvard Street	60,000 00		
Boys' School, east side Essex Street .	18,000 00		
Sisters' Home, 50 and 52 Essex Street	7,000 00		
49,928 feet of land	20,000 00		
Theatre, east side Norfolk Street .	15,000 00		
13,032 feet of land	6,500 00		
Gymnasium, east side Prospect Street	35,000 00		
11,370 feet of land	5,600 00		
House, 121 Norfolk Street . . .	7,500 00		
7,500 feet of land	2,300 00		
		221,900 00	
Cambridge Home for Aged People, 183 Hancock Street: —			
Personal property	72,959 05		
12,094 feet of land	6,000 00		
One house	7,000 00		
		85,959 05	
First Reformed Presbyterian Church, west side Antrim Street . . .	7,000 00		
5,000 feet of land	2,000 00		
		9,000 00	
St. Bartholomew's Church, west side Columbia Street	6,000 00		
5,075 feet of land	1,500 00		
		7,500 00	
First United Presbyterian Church: —			
Church, south side Cambridge Street,	6,000 00		
9,173 feet of land	4,600 00		
		10,600 00	
Amounts carried forward		$549,259 05	$13,725,444 81

Amounts brought forward		$549,259 05	$13,725,444 81
Host Ghost Hospital for Incurables, Cambridge Sreeet: —			
72,310 feet of land		10,000 00	
			$559,259 05
Ward Three.			
Trinity Methodist Episcopal Church: —			
Church, Cambridge, corner Third Street	$25,000 00		
6,500 feet of land	16,300 00		
		41,300 00	
Massachusetts Baptist Convention, Trustee: —			
Church, Cambridge and Fourth Streets	25,000 00		
6,000 feet of land	11,000 00		
		36,000 00	
Church of the Ascension: —			
Church, Third and Thorndike Streets	$5,000 00		
4,800 feet of land	4,000 00		
		9,000 00	
Second Universalist Society: —			
Church, Otis Street	16,000 00		
5,950 feet of land	3,500 00		
		19,500 00	
Church of the Sacred Heart: —			
Church, Sixth, Otis and Seventh Streets	70,000 00		
18,400 feet of land	7,400 00		
		77,400 00	
St. John's Church: —			
Church, east side Fourth . . .	5,000 00		
7,005 feet of land	4,200 00		
		9,200 00	
County of Middlesex: —			
Court House, Third, Otis and Thorndike Streets	208,500 00		
Probate Building	125,000 00		
Registry of Deeds, Second, Otis and Third Streets	55,000 00		
59,572 feet of land	60,000 00		
		448,500 00	
Registry of Deeds (new): —			
Cambridge, Otis, Second and Third Streets	376,000 00		
59,380 feet of land	60,000 00		
		436,000 00	
House of Correction, jail and shops, Thorndike, Third, Spring and Second Streets	425,000 00		
59,880 feet of land	30,000 00		
		455,000 00	
Amounts carried forward		$1,531,900 00	$14,284,703 86

Amounts brought forward		$1,531,900 00	$14,284,703 86
St. John's Literary Institute:—			
Hall and stores, Cambridge Street, ⅔ value	$20,000 00		
½ of 6,300 feet of land . . .	4,700 00		
Cash assets	3,203 21		
		27,903 21	
			$1,559,803 21
Ward Four.			
Cambridge Young Men's Christian Association:—			
Personal property	$11,550 00		
New building, Massachusetts Avenue	107,000 00		
24,145 feet of land	12,000 00		
		130,550 00	
Immanuel Baptist Church:—			
Church, east side Magazine Street .	25,000 00		
11,250 feet of land	3,000 00		
		28,000 00	
First Baptist Society:—			
Church, Central Square . . .	80,000 00		
21,400 feet of land	20,000 00		
		100,000 00	
First Church of the Evangelical Association of North America:—			
Church, 44 William Street . . .	5,000 00		
6,750 feet of land	2,700 00		
		7,700 00	
First Swedish Baptist Church of Cambridge:—			
1 house, 77 Columbia Street . . .	2,000 00		
2,765 feet of land	1,200 00		
		3,200 00	
Grace Methodist Episcopal Church:—			
Church, east side Magazine Street .	15,000 00		
7,750 feet of land	5,000 00		
		20,000 00	
Massachusetts Baptist Convention—			
Union Baptist Church:—			
Church, 874 Main Street . . .	10,000 00		
3,900 feet of land	2,800 00		
		12,800 00	
Pilgrim Congregational Church:—			
Church, west side Magazine Street .	30,000 00		
8,885 feet of land	7,500 00		
1,800 feet of land	1,200 00		
		38,700 00	
Baptist Home, 80 Chestnut Street, and 308 Brookline Street, one house and stable	11,500 00		
Personal property	3,785 71		
21,300 feet of land	10,000 00		
		25,285 71	
The Lamson Home, 322 Brookline Street, one house	5,000 00		
5,000 feet of land	2,000 00		
Personal property	8,110 00		
		15,110 00	
Amounts carried forward		$381,345 71	$15,844,507 07

Amounts brought forward		$381,345 71	$15,844,507 07
Mount Olive Baptist Church, south side State Street: —			
5,000 feet of land		2,500 00	
Protestant Episcopal Church, Trustees of Donations to: —			
Church, south side Massachusetts Avenue (St. Peter's)	$10,000 00		
9,229 feet of land	9,200 00		
		19,200 00	
East End Union Mission: —			
Church, west side Burleigh Street on Rogers' land		3,500 00	
Rush African M. E. Zion Church: —			
Church, south side School Street .	6,000 00		
2,760 feet of land	1,100 00		
		7,100 00	
St. Philip's Church, Episcopal: —			
Church, north side Allston Street .	3,000 00		
4,646 feet of land	1,200 00		
		4,200 00	
Wood Memorial Church Congregational: —			
Church, west side Columbia, corner Austin Street	30,000 00		
7,500 feet of land	4,000 00		
		34,000 00	
Prospect Union Association: —			
Personal property	11,553 31		
Building, 744 Massachusetts Avenue	6,700 00		
11,449 feet of land	7,200 00		
		25,453 31	
			477,299 02
Ward Five.			
Catholic Cemetery, Rindge Avenue, 304,014 feet of land		$30,000 00	
North Avenue Congregational Society: —			
Church, Massachusetts Avenue . .	30,000 00		
13,430 feet of land	8,000 00		
		38,000 00	
Third Universalist Society: —			
Church, Massachusetts Avenue . .	30,000 00		
14,880 feet of land	9,000 00		
		39,000 00	
St. James Episcopal Society: —			
Church and chapel, Massachusetts Avenue and Beech Street . .	75,000 00		
21,207 feet of land (cemetery lot included)	12,700 00		
		87,700 00	
Abbott, Edward, Trustee for, west side Beech Street: —			
Lot, 7,965 feet of land . . .		3,200 00	
Amounts carried forward		$197,900 00	$16,321,806 09

Amounts brought forward		$197,900 00	$16,321,806 09
North Avenue Baptist Society: —			
Church, Massachusetts Avenue . .	$55,000 00		
38,525 feet of land	19,000 00		
		74,000 00	
Williams, John J., south side Rindge Avenue: —			
Schoolhouse	40,000 00		
20,220 feet of land	4,000 00		
		44,000 00	
Marist Fathers of Boston, French Roman Catholic Church: —			
Church, north side Harvey Street .	40,000 00		
14,645 feet of land	3,000 00		
		43,000 00	
Weymouth, Harrison G. O. (disabled soldier): —			
Orchard Street, 4,800 feet of land .		1,900 00	
			360,800 00
			$16,682,606 09

REPORT OF THE COMMITTEE ON ACCOUNTS

CAMBRIDGE, December 26, 1899.

To the Honorable, the City Council:—

In conformity with the requirements of Section 4 of Chapter 4 of the Ordinances of the City, the annual report of the Committee on Accounts for the present year, is herewith submitted:—

The Committee has met as often as once in each month during the year, and has carefully scrutinized the numerous bills approved by the various departments and boards, and has made the required examination of the Auditor's books and accounts. The management of the department has been very satisfactorily conducted, and the accuracy and neatness with which the books and accounts have been kept, deserve and receive the hearty commendation of the Committee.

ISAAC McLEAN,
HAMILTON H. PERKINS,
EDGAR P. BAKER,
JAMES J. MALLEY,
JOHN D. MERRILL,
} *Committee on Accounts.*

REPORT OF THE COMMITTEE ON FINANCE

Following a custom sanctioned by the practice of many years, the Committee on Finance for the year, 1899, submits herewith its final report.

The annual estimates as reported by this Committee in the month of February aggregated as follows: —

APPROPRIATIONS AND REVENUE, 1899.

TOTAL ESTIMATE OF REVENUE.

City Department accounts	$136,230 00	
Water Department accounts	322,212 50	
Other revenue	325,000 00	
Cash in Treasury December 1, 1898	206,150 28	
Grand total		$989,592 78

TOTAL AMOUNT OF APPROPRIATIONS RECOMMENDED.

	Revenue.	Expenses.
City Department accounts	$136,230 00	$1,835,852 21
Water Department accounts	322,200 00	360,712 50
	$458,430 00	$2,196,564 71

GENERAL RECAPITULATION.

Amount of estimate of expenses as before recited	$2,196,564 71	
Allowance for City Treasurer's estimate of uncollected taxes for the year 1899, remaining uncollected as of November 30, 1899	230,000 00	
Total appropriations and liabilities		$2,426,564 71

LESS.

Estimated revenue of all kinds of cash in the Treasury	$989,592 78
Leaving an amount to be provided for	$1,436,971 93

The Committee recommended that this amount be provided for as follows: —

I. By issue of City Bonds, viz.: —		
Cambridge Bridge loan	$50,000 00	
Water loan	13,000 00	
		$63,000 00
Amount carried forward		$63,000 00

Amount brought forward	$63,000 00
2. By assessment upon the polls and estates of the inhabitants of Cambridge, etc., for the current year, being the amount required for municipal expenses for the year	$1,373,971 93
	$1,436,971 93

In accordance with the foregoing the following orders were reported: —

CITY OF CAMBRIDGE
IN COMMON COUNCIL, March, 7, 1899.

Ordered: That the sum of *one million, three hundred and seventy-three thousand, nine hundred and seventy-one dollars and ninety-three cents* ($1,373,971.93), be raised by assessment upon the polls and estates of the inhabitants of the City of Cambridge, and the estates of non-resident proprietors, according to law, to defray the current expenses of the City for the financial year, beginning December 1, 1899, and ending November 30, 1899.

CITY OF CAMBRIDGE.
IN COMMON COUNCIL, March 7, 1899.

Ordered: That the sums following be and are hereby appropriated towards defraying the expenses of the City of Cambridge for the financial year, beginning December 1, 1898, and ending November 30, 1899.

Following the latter order was a list of the several appropriations recommended, the whole including the Water Department appropriations, amounting as hereinbefore stated to the sum of $2,196,564.71

The report of the Committee was accepted and its recommendations adopted without change.

The usual sub-committee, which consisted of Alderman John J. Ahern, President William F. Brooks, and Albert H. Hall, of the Common Council, was appointed to examine the condition of the City Treasury at the close of business, on Wednesday, November 29, that being the last business day of the financial year.

The sub-committee attended to its duty and subsequently submitted the following report: —

CITY OF CAMBRIDGE, December 15, 1899.

To the Committee on Finance: —

GENTLEMEN: — The Sub-Committee appointed to count and examine the cash in the hands of the City Treasurer at the close of business on November 29, 1899, would respectfully report: —

November 29, 1899. Actual cash and business checks in City Treasurer's office amounted to . . .		$23,629 21
Also a certificate from W. F. Earle, Cashier of the First National Bank of Cambridge, Mass, showing a balance (at close of business, November 29, 1899) to the credit of the City Treasurer, of	$114,685 03	
Amounts carried forward . .	$114,685 03	$23,629 21

Amounts brought forward		$114,685 03	$23,629 21
From this balance should be deducted the following Treasurer's checks, not presented to bank for payment, Nos. 12,930, 12,947, 13,019, 13,047, 13,055, 13,056, amounting to	6,614 84		
Making a net balance in above Bank of . . .		108,070 19	
Also a certificate from Geo. A. Lloyd, Cashier of the Lechmere National Bank of Cambridge, Mass., showing a balance (at close of business, November 29, 1899) to the credit of the City Treasurer, of . .		10,103 90	
Also a certificate from Louis W. Cutting, Treasurer of the Cambridge Safe Deposit and Trust Company of Cambridge, Mass., showing a balance (at close of business, November 29, 1899) to the credit of the City Treasurer of	$45,292 98		
From this balance should be deducted the following Treasurer's check, not presented to the Company for payment, No. 189, amounting to . .	30,000 00		
Making a net balance in above Trust Company of .		15,292 98	
Making the total cash on hand			$157,096 28

December 15, 1899. After the above examination by your Committee, certain additional entries belonging to the financial year 1899 were made, the receipts and expenditures which these same represent, being as follows:—

RECEIPTS.

Account of City Lands, sale of Quincy Schoolhouse and land	$25,000 00	
Account of Overseers of the Poor: —		
Almshouse collections	4 65	
Farm	770 81	
House offal	220 71	
Account of Park Betterment Liens: —		
Release of sundry Park Betterment deeds, held by City of Cambridge	1,400 64	
From Commonwealth of Massachusetts: —		
Account of Soldiers' Relief	3,128 00	
Account of State Aid	15,198 93	
Account of Corporation Tax	83,891 42	
Account of National Bank Tax, being amount received for stocks of Massachusetts Banks outside of Cambridge, owned by Cambridge residents .	14,886 04	
Account of Street Railway Tax (Chap. 578, Acts 1898)	47,569 33	
Account of Contingent Fund: —		
From City of Boston	430 37	
Account of Taxes 1899, additional to entry of November 29, 1899, but not previously reported . . .	30,993 91	
Street Watering collections (taxes 1899) . . .	250 26	
Amounts carried forward		$223,745 07

Amounts brought forward	$223,745 07	
Interest (taxes 1899)	90 33	
Treasury Department. (Costs, taxes 1899) . .	96 40	
A total of		$223,931 80
Which amount, added to City Treasurer's balance of November 29, 1899, as above, makes a total of .		$381,028 08

EXPENDITURES.

Authorized additional payments as of November 29, 1899, verified by your Committee, are as follows: —		
Paid Commonwealth of Massachusetts: —		
Account of Contingent Fund, being one-fourth part of 54 sixth class liquor licenses	$13 50	
Account of Metropolitan Sewer Tax, being annual assessment of Interest, Maintenance and Sinking Fund charges on account of Metropolitan Sewer,	74,763 08	
Account of National Bank Tax, being refund of Taxes on non-resident owners of stock in Cambridge Banks	7,681 26	
Account of State Tax, being assessment for year 1899	48,195 00	
Paid sundry persons: —		
Account of Bridge Department per Auditor's Draft .	5 55	
Account of Public Library Department . . .	11 65	
Account of Abatements. Taxes. Assessors certificatse received and paid on account of taxes 1899, as per additional entry of November 29, 1899 .	806 57	
A total of		$131,476 61
Which, deducted from the foregoing total of receipts, shows a balance in the City Treasurer's hands as of November 29, 1899, of		$249,551 47
Your Committee would further state that we carefully examined the total cash receipts for the financial year of 1899, as of the City Treasurer's books, and find the same to be as follows: —		
Total cash receipts from all sources for the year ending November 29, 1899, as per City Treasurer's ledger	$3,239,629 53	
To this should be added cash balance of November 30, 1898	263,910 17	
A total of		$3,503,539 70
Total cash expenditures for the year ending November 29, 1899, as per City Treasurer's ledger, the same authorized by sundry drafts of the Mayor, which your Committee examined		$3,253,988 23
Which amount deducted from the above total, shows a cash balance as of November 29, 1899, verified by our above report of examination, of . . .		$249,551 47

The sub-committee were enabled to further verify the above statement of receipts and expenditures, by comparison with the City Auditor's statement for December, 1899.

JOHN J. AHERN,
WILLIAM F. BROOKS, } *Sub-Committee.*
ALBERT H. HALL.

The report of the sub-committee was accepted and ordered to be incorporated with this annual report.

The matters which have been brought before this Committee during the past year have been numerous and important. The Committee has endeavored to consider them in the light of an intelligent conservatism and with a view only to the promotion of the interests of the City.

WALTER C. WARDWELL,
WARREN F. SPALDING,
JOHN J. AHERN,
GEORGE E. SAUNDERS,
WILLIAM F. BROOKS,
WILLIAM F. WADDEN,
EDGAR P. BAKER,
JAMES D. HILL,
ALBERT H. HALL,
WILLIAM H. QUINN.

Committee on Finance.

REPORT OF THE CITY TREASURER

City of Cambridge,
Office of City Treasurer, December 1, 1899.

To the Honorable, the City Council:—

In the following pages I submit a detailed report of the receipts and expenditures of the public funds by the Treasury Department, during the year ending November 29, 1899, including an account of all bonded and temporary loans negotiated in said year; also a detailed account of official fees received, and reports on the Cemetery Fund and the Sarah E. Russell Fund.

Very respectfully,

WM. W. DALLINGER,
City Treasurer.

CITY OF CAMBRIDGE IN ACCOUNT CURRENT FROM DECEMBER 1, 1898, TO

Dr.

To authorized payments charged to City Accounts: —	
Abatements — Taxes	$35,317 61
Assessors' Department	13,429 43
Auditing Department	3,488 13
Bridge Department	16,509 33
Cambridge Bridge	43,125 50
Cemetery Department	20,590 30
Cemetery Fund	3,136 00
City Clerk's Department	7,500 90
City Clerk's Department — Printing Town Records	247 00
City Clerk's Department — Russell Memorial	53 72
City Messenger's Department	2,554 03
Civil Service Department	257 00
Clerk of Committees Department	3,984 50
Contingent Fund	13,099 51
Election Expenses: —	
City Clerk	5,204 68
Registrars of Voters	3,420 87
Superintendent of Buildings	2,057 11
Engineering Department	10,982 35
Engineering Department — Assessors' Plans	234 10
Executive Department	5,172 76
Filling City Lands	1,624 80
Fire Department	85,664 13
Health Department	18,347 30
Inspection of Milk and Vinegar Department	1,489 30
Inspection of Provisions Department	826 04
Inspection of Wires Department	13,516 94
Interest	139,382 86
Lamp Department	72,014 47
Land Damages	15,490 43
Law Department	5,849 18
Loan: —	
Street Widening	8,000 00
Temporary	550,000 00
Overseers of the Poor Department: —	
Almshouse	21,203 22
Farm	5,300 45
House Offal	25,665 78
Outside Aid	52,276 02
Salary City Physician	1,500 00
Park Department: —	
Construction	100,425 37
Interest on Park Loan	38,880 00
Maintenance	14,450 26
Sinking Fund	16,250 00
Plumbers' Examiners' Department	111 50
Police Department	117,096 40
Public Library Department: —	
Current Expenses	20,418 74
East Cambridge Branch	1,210 15
Public Property: —	
City Buildings	18,720 67
Ellis Schoolhouse	21,407 58
Ellis Schoolhouse — Furnishings	2,464 84
Furnishings — City Treasurer's Safe	700 00
Heating — Morse and Putnam Schoolhouses	31,909 94
Incidentals	5,543 74
New Latin Schoolhouse	63,201 21
New Latin Schoolhouse — Furnishings	17,920 35
Peabody Schoolhouse	17,113 22
Peabody Schoolhouse — Furnishings	1,947 43
Rebuilding Harvard Grammar Schoolhouse	23,765 48
Remodelling Otis Schoolhouse	7,966 00
Roberts Schoolhouse	32,150 17
Roberts Schoolhouse — Furnishings	2,592 89
Schoolhouses — Care and Repairs	80,200 70
Shooting Range	596 15
Amount carried forward	$1,847,562 54

Nov. 30, 1899 (inclusive), with Wm. W. Dallinger, City Treasurer.

Cr.

By Receipts as follows: —	
Betterments: —	
Eighth Street	$320 35
Eliot Street	674 80
Magee Street	564 65
Bridge Department	713 43
Cambridge Bridge	4,000 00
Cemetery Department	16,133 90
Cemetery Fund	3,136 00
City Clerk's Department	2,401 20
City Lands	25,000 00
Commissioners of Sinking Funds	8,000 00
Contingent Fund	705 89
Engineering Department	500 00
Fire Department	187 20
Inspection of Milk and Vinegar Department	151 00
Inspection of Wires Department	7 86
Interest	9,547 76
Lamp Department	42 75
Law Department	1,000 00
Loan: —	
Cambridge Bridge	50,000 00
City	77,000 00
Clay Land	17,000 00
Park	100,000 00
School House	55,000 00
Sewer	42,000 00
Street	5,000 00
Temporary	550,000 00
Water	23,000 00
Overseers of the Poor Department: —	
Almshouse	845 71
Farm	6,049 47
House Offal	6,997 40
Outside Aid	5,730 49
Park Betterment Lien Account	3,892 35
Park Department: —	
Construction	7,406 43
Interest on Park Loan	126 39
Maintenance	21 60
Plumbers' Examiners' Department	28 50
Police Department	5,884 96
Premium Account	23,625 00
Public Library Department—Current Expenses	4,627 70
Public Property Department: —	
City Buildings	1,686 83
Rebuilding Harvard Grammar Schoolhouse	204 30
School Department: —	
Salaries	5,672 15
Text-books and Supplies	392 87
Sealer of Weights and Measures	517 29
Sewer Department: —	
Construction	8,791 63
Maintenance	389 49
Soldiers' Relief	3,152 00
State Aid	15,511 58
Stationery and Printing	923 23
Street Department: —	
Maintenance	3,677 40
Paving — Edgestones and Sidewalks	12,768 02
Rebuilding Harvard Square	3,365 53
Rebuilding Pearl Street	9,500 00
Rebuilding Portland Street	19,000 00
Rebuilding Prospect Street	17,588 52
Watering	17,614 29
Tax: —	
Corporation	98,405 61
National Bank	15,931 68
Street Railway	47,569 33
Amount carried forward	$1,339,984 54

City of Cambridge in Account Current from December 1, 1898, to

Dr.

Amount carried forward	$1,847,562 54
School Department: —	
Care of Truants	1,852 96
Flags	307 07
Incidentals	1,688 33
Salaries	312,552 87
Text-books and Supplies	21,806 64
Sealer of Weights and Measures	1,762 39
Sewer Department: —	
Clay Land Sewers	86 50
Construction	26,464 31
Improved Sewerage	32,730 56
Maintenance	18,394 17
Sinking Fund Department: —	
Clay Lands	4,000 00
General Account	106,775 00
Harvard Bridge	8,000 00
Soldiers' Relief	1,698 50
State Aid	25,595 92
Stationery and Printing	2,955 12
Street Department: —	
Bridges	2,404 71
Clay Land Streets	12,381 73
Cleaning Streets	35,738 94
Collection of Ashes	22,000 00
Maintenance	78,216 86
Paving: —	
Crossings and Repairs	9,892 96
Edgestones and Sidewalks	21,174 54
Rebuilding Harvard Square	3,364 39
Rebuilding Portland Street	4,067 46
Rebuilding Prospect Street	25,119 41
Watering	25,308 33
Tax: —	
County	87,085 65
Metropolitan Sewer	74,763 08
National Bank	7,681 26
State	48,195 00
Treasury Department	14,765 78
Water Works Department: —	
Construction: —	
Fresh Pond Land Account	428 62
Fresh Pond Reservoir	2,919 48
General Acconnt	31,334 19
Hobbs Brook Reservoir	11,989 27
Payson Park Reservoir	1,090 03
Interest on Water Loan	130,674 00
Maintenance: —	
General Account	62,643 07
Renewal of Mains	346 11
Rates, Fines, etc.: —	
Abatements	4,978 50
Refunds	2,791 15
Sinking Funds	113,718 50
Supplies	6,483 56
Supplies — Abatements	198 77
Total Payments	$3,253,988 23
Cash Balance in Treasury, November 29, 1899	249,551 47
	$3,503,539 70

Nov. 30, 1899 (inclusive), with Wm. W. Dallinger, City Treasurer.

Cr.

Amount carried forward		$1,339,984 54
Taxes: —		
1893	52 20	
1894	63 58	
1895	556 96	
1896	9,209 70	
1897	8,184 25	
1898	225,353 62	
1899	1,332,340 97	
Treasury Department	2,366 19	
Water Works Department: —		
Construction: —		
General Account	1,295 00	
Hobbs Brook Reservoir	65 00	
Maintenance	1,830 09	
Rates, Fines, etc	311,536 40	
Supplies	6,791 03	
Total Receipts		$3,239,629 53
Cash Balance in Treasury, November 30, 1898		263,910 17
		$3,503,539 70

FEES.

During the year the Treasurer has received official fees amounting to $2,366.19, itemized as follows: —

Summonses to delinquents	$1,205 20	
Preparing advertisements of sale	462 49	
Advertisements of sale	72 38	
Posting notices of sale	329 00	
Making tax deeds	147 00	
Making affidavits	147 00	
Other fees	3 12	
		$2,366 19

These fees were all turned into the City Treasury as received.

CEMETERY FUND.

This fund, held by the City Treasurer in trust, comprises sums received from the proprietors of lots in our Cambridge Cemetery, for the perpetual care of their lots therein. The amount of the fund is now $46,414.30, and is invested as follows, viz.: —

City of Cambridge 4 per cent. registered bond, due November 1, 1903, for	$10,000 00
" " 3½ " " " " November 1, 1906, "	7,000 00
" " 4 " " " " November 1, 1907, "	2,000 00
" " 3½ " " " " August 1, 1908, "	4,900 00
" " 4 " " " " November 1, 1909, "	2,000 00
" " 4 " " " " May 1, 1910, "	5,000 00
" " 4 " " " " October 1, 1916, "	2,000 00
" " 3½ " " " " August 1, 1918, "	1,000 00
" " 3½ " " " " November 1, 1919, "	3,000 00
" " 4 " " " " October 1, 1925, "	7,500 00
Deposited in Cambridgeport Savings Bank	2,014 30
	$46,414 30

The interest received on this fund is annually credited to the account of "Cambridge Cemetery," to be expended by the Commissioners of said Cemetery in the carrying out of the City's obligation.

SARAH E. RUSSELL FUND.

This is a fund bequeathed by the late Sarah E. Russell, of Cambridge, in 1898, "the income therefrom to be annually expended in or towards providing a Christmas tree or Christmas gifts and entertainment for the inmates at the time of the Cambridge Almshouse." The amount of the bequest was $814.41 and was deposited in the Cambridgeport Savings' Bank, where it now remains. The interest accumulations to November

30 of the present year amounted to $41.34, which amount was collected and handed to Capt. Eldridge, Warden of our Almshouse, to be used at the approaching Christmas as the thoughtful and generous benefactor requested.

Very respectfully,

WM. W. DALLINGER,

City Treasurer.

TEMPORARY LOANS, IN ANTICIPATION OF TAXES, NEGOTIATED IN THE YEAR ENDING NOVEMBER 29, 1899.

Date.	Maturity.	Amount.	
1899.	**1899.**		
Jan. 30....	Oct. 11.....	$25,000	Discounted at 2.55 per cent. per annum.
Jan. 30....	Oct. 11.....	25,000	" " 2.55 " "
Jan. 30....	Oct. 11.....	25,000	" " 2.55 " "
Jan. 30....	Oct. 11.....	25,000	" " 2.55 " "
Feb. 27....	Oct. 12.....	25,000	" " 2.96 " "
Feb. 27....	Oct. 12.....	25,000	" " 2.96 " "
Feb. 27....	Oct. 12.....	25,000	" " 2.96 " "
Feb. 27....	Oct. 12.....	25,000	" " 2.96 " "
March 29....	Oct. 13.....	25,000	" " 3.00 " "
March 29....	Oct. 13.....	25,000	" " 3.00 " "
March 29....	Oct. 13.....	25,000	" " 3.00 " "
March 29....	Oct. 13.....	25,000	" " 3.00 " "
May 9....	Oct. 14-16....	25,000	" " 3.00 " "
May 9....	Oct. 14-16....	25,000	" " 3.00 " "
July 13....	Oct. 16.....	25,000	" " 2.95 " "
July 13....	Oct. 16.....	25,000	" " 2.95 " "
Aug. 1....	Oct. 16.....	25,000	" " 3.125 " "
Aug. 1....	Oct. 16.....	25,000	" " 3.20 " "
Aug. 1....	Oct. 16.....	25,000	" " 3.20 " "
Aug. 1....	Oct. 16.....	25,000	" " 3.20 " "
Sept. 9....	Oct. 18.....	25,000	" " 3.625 " "
Sept. 9....	Oct. 18.....	25,000	" " 3.625 " "
		$550,000	Average rate 2.996 per cent.

These loans were all paid before the close of the financial year.

PARTICULARS CONCERNING THE BONDS NEGOTIATED DURING THE YEAR ENDING NOVEMBER 29, 1899.

Date of Sale.	Amount.	Loan.	Years to run.	Rate of Interest.	Purchaser.	Price Paid.	Basis.
1899.				Per cent.			
June 30....	$45,000	City	10	3½	Jose, Parker & Co. } One price paid for aggregate of these bonds.	107.179	3.07
June 30....	17,000	Clay Land	15	3½	Jose, Parker & Co.		
June 30....	42,000	Schoolhouse	20	3½	Jose, Parker & Co.		
June 30...	50,000	Cambridge Bridge	40	3½	Jose, Parker & Co.		
Aug. 14....	100,000	Park	40	3½	E. H. Rollins & Co.	109.917	3.07
Nov. 23....	42,000	Sewer	30	3½	Commissioners of Sinking Funds of Cambridge, Mass.	106.75	3.15
Nov. 23....	32,000	City	10	3½	Commissioners of Sinking Funds of Cambridge, Mass.	Par	
Nov. 23...	5,000	Street	20	3½	Commissioners of Sinking Funds of Cambridge, Mass.	Par	
Nov. 23....	13,000	Schoolhouse	20	3½	Commissioners of Sinking Funds of Cambridge, Mass.	Par	
Nov. 29....	23,000	Water	20	3½	Trustees of Sinking Funds of Cambridge Water Works	Par	
	$369,000				Average basis 3.25.		

RECAPITULATION.

Cambridge Bridge Loan	$50,000	Sewer Loan	$42,000
City Loan	77,000	Street Loan	5,000
Clay Land Loan	17,000	Water Loan	23,000
Park Loan	100,000		
Schoolhouse Loan	55,000	Total issue	$369,000

REPORT OF THE COMMISSIONERS OF THE SINKING FUNDS

To the Honorable, the City Council:—

The undersigned Commissioners of the Sinking Funds of the City herewith present their twenty-fourth annual report, covering the year ending November 30, 1899.

DR.

The amount of the funds, November 30, 1898, was	$780,361 71	
Received from the City Treasurer, the annual requirements for the year as appropriated by the City Council for the different loans	135,000 00	
Interest received on invested funds	33,739 02	
		$949,100 73

CR.

Paid the City Treasurer amount necessary to meet maturing Cambridge bonds, maturing November 1, 1899	8,000 00	
Paid premium on investments purchased	9,240 27	
Paid accrued interest on investments purchased	1,126 56	
Leaving the amount of the funds November 30, 1899, all securities enumerated at par	930,733 90	
		$949,100 73

The following are the investments belonging to the funds: —

Cambridge	6s,	Maturing	July 1, 1904	$92,000 00	
"	6s,	"	July 1, 1905	63,000 00	
"	3 1-2s,	"	Nov. 1, 1909	32,000 00	
"	3 1-2s,	"	Nov. 1, 1919	18,000 00	
"	3 1-2s,	"	Nov. 1, 1929	42,000 00	
					$247,000 00
Quincy	4s,	"	July 1, 1900	$500 00	
Gloucester	4s,	"	May 1, 1901	4,000 00	
Brockton	4s,	"	June 1, 1901	3,000 00	
Quincy	4s,	"	July 1, 1901	2,500 00	
Somerville	4s,	"	July 1, 1901	16,000 00	
Brockton	4s,	"	Dec. 1, 1901	4,000 00	
Gloucester	4s,	"	May 1, 1902	4,000 00	
Quincy	4s,	"	July 1, 1902	7,500 00	
Somerville	4s,	"	July 1, 1902	14,000 00	
Cleveland, O.	3 65-100s,	"	Sept. 1, 1902	1,000 00	
Brockton	4s,	"	Dec. 1, 1902	4,000 00	
"	4s,	"	June 1, 1903	4,000 00	
Quincy	4s.	"	July 1, 1903	7,500 00	
Brockton	4s,	"	Dec. 1, 1903	4,000 00	
"	4s,	"	June 1, 1904	4,000 00	
Quincy	4s,	"	July 1, 1904	7,500 00	
Lawrence	4s,	"	July 1, 1904	12,000 00	
Pawtucket, R. I.	4s,	"	July 1, 1904	15,000 00	
Hopkinton	4s,	"	Sept. 30, 1904	5,000 00	
Brockton	4s,	"	Dec. 1, 1904	4,000 00	
Quincy	4s,	"	July 1, 1905	7,000 00	
Haverhill	4s,	"	Oct. 1, 1905	50,000 00	
Amounts carried forward				$180,500 00	$247,000 00

Amounts brought forward				$180,500 00	$247,000 00
Brockton	4s,	Maturing	Dec. 1, 1905	$4,000 00	
Gloucester	4s,	"	May 1, 1906	2,000 00	
Quincy	4s,	"	July 1, 1906	1,000 00	
Fitchburg R. R. Co.	4s,	"	Apl. 1, 1907	50,000 00	
Watertown	3 1-2s,	"	Jan. 1, 1908 to 1922	85,000 00	
Somerville	4s,	"	July 1, 1908	8,000 00	
Belmont	4s,	"	Oct. 1, 1908	15,000 00	
Medford	4s,	"	Dec. 15, 1908	10,000 00	
New Bedford	3 1-2s,	"	Feb. 1, 1909	40,000 00	
Pawtucket, R. I.	4s,	"	July 1, 1909	30,000 00	
Beverly	4s,	"	July 1, 1911	9,000 00	
Medford	4s,	"	July 1, 1911	26,000 00	
Boston & Lowell R.R. Co.	4s,	"	Feb. 1, 1913	1,000 00	
Medford	4s,	"	July 1, 1915	23,000 00	
Melrose	4s,	"	Feb. 24, 1916	10,000 00	
Brockton	3 1-2s,	"	July 1, 1916	5,000 00	
Boston & Lowell R.R. Co.	4s,	"	July 1, 1916	10,000 00	
Fitchburg R. R. Co.	4s,	"	July 1, 1916	10,000 00	
Marlborough	4s,	"	July 1, 1918	10,000 00	
Medford	4s,	"	Aug. 1, 1918	50,000 00	
Stoughton	4s,	"	June 1, 1920	2,000 00	
Reading	4s,	"	June 1, 1922	5,000 00	
"	4s,	"	June 1, 1923	5,000 00	
Medford	4s,	"	July 1, 1923	2,000 00	
Old Colony R. R. Co.	4s,	"	Dec. 1, 1925	50,000 00	
Fitchburg R. R. Co.	4s,	"	Mar. 1, 1927	40,000 00	
					683,500 00
					$930,500 00
Cash in Bank on interest					233 90
					$930,733 90

CAMBRIDGE, December 13, 1899.

To the Board of Commissioners of the Sinking Funds of the City of Cambridge :—

Your Committee appointed to examine the accounts of the Treasurer of the Funds reports that his books are carefully kept and his accounts are correct and properly vouched. We have computed the cash and bond transactions for the year, independently of the Treasurer's books, and the present par value of the Funds, as shown by his books, is thus verified. We have also figured the interest which the Treasurer should have received during the year and found the amount to agree with his report.

The transactions of the Treasurer and the sub-committee on investment during the year, and also the present condition of the Funds is shown by the following statement.

BOND ACCOUNT.

Amount of bonds in the Funds, Nov. 30, 1898 . . .	$771,500 00	
Amount of bonds purchased during the year . . .	227,000 00	
	998,500 00	
Amount of bonds, matured during the year . . .	68,000 00	
Amount of bonds in the Funds, at par value, Nov. 30, 1899		$930,500 00
Amount carried forward		$930,500 00

Amount brought forward			$930,500 00

CASH ACCOUNT.

Cash on hand Nov. 30, 1898	$8,861 71		
Cash received from the City derived from taxation	135,000 00		
Cash received from interest on investments	33,739 02		
Cash received from matured bonds . .	68,000 00		
		$245,600 73	
Cash paid for bonds purchased . . .	$227,000 00		
Cash paid for premium on bonds purchased	9,240 27		
Cash paid for accrued interest on bonds purchased	1,126 56		
Amount paid to redeem City Debt falling due this year	8,000 00		
		245,366 83	
Cash on hand Nov. 30, 1899, deposited in the First National Bank of Cambridge			233 90
Total amount of the Funds, Nov. 30, 1899, all bonds taken at par value . . .			$930,733 90

FRANK A. ALLEN,
JOHN C. BULLARD, } *Committee on Accounts.*

The bonded City Debt which the foregoing Sinking Funds are to pay, matures as follows, viz. :—

May 1, 1900, Schoolhouse	4s	$100,000 00	
Jan. 1, 1901, Schoolhouse	4s	100,000 00	
July 1, 1901, Schoolhouse	4s	60,000 00	
July 1, 1901, Bridge	4s	15,000 00	
May 2, 1902, Street	4s	55,000 00	
May 2, 1902, Building	4s	20,000 00	
Nov. 1, 1902, Paving	4s	50,000 00	
Nov. 1, 1902, Schoolhouse	4s	20,000 00	
July 1. 1903, Sewer	6s	136,000 00	
July 1, 1903, Street widening	6s	10,000 00	
Nov. 1, 1903, Building	4s	40,000 00	
July 1, 1904, Sewer	6s	295,000 00	
July 1, 1904, Street widening	6s	90,000 00	
Aug. 1, 1904, City	4s	52,000 00	
July 1, 1905, Sewer	6s	144,000 00	
July 1, 1905, Street widening	6s	14,000 00	
Aug. 1, 1905, Cemetery	4s	65,000 00	
Nov. 1, 1907, Sewer	4s	30,000 00	
Nov. 1, 1907, Paving	3 1-2s	20,000 00	
Nov. 1, 1907, Schoolhouse	3 1-2s	9,500 00	
Nov. 1, 1907, Street	3 1-2s	11,000 00	
Aug. 1, 1908, City	3 1-2s	4,900 00	
July 1, 1909, "	3 1-2s	45,000 00	
Nov. 1, 1909, Sewer	4s	22,000 00	
Nov. 1, 1909, City	3 1-2s	32,000 00	
May 1, 1910, Sewer	4s	15,000 00	
July 1, 1911, "	4s	15,000 00	
July 1, 1911, Clay land	4s	50,000 00	
Nov. 1, 1912, "	3 1-2s	20,000 00	
Aug. 1, 1913, "	3 1-2s	10,000 00	
July 1, 1914, "	3 1-2s	17,000 00	
Aug. 1, 1914, Building	4s	118,000 00	
Aug. 1, 1914, Street	4s	30,000 00	
Oct. 1, 1915, Building	4s	60,000 00	
Amount carried forward			$1,775,400 00

Amount brought forward				$1,775,400 00
Oct. 1, 1915,	Street	4s	$60,000 00	
July 1, 1916,	Building	4s	70,000 00	
Oct. 1, 1916,	Street	4s	137,000 00	
Oct. 1, 1916,	Building	4s	33,000 00	
Oct. 1, 1916,	Sewer	4s	75,000 00	
Oct. 1, 1916,	Schoolhouse	4s	6,000 00	
July 1, 1917,	Schoolhouse	3 1-2s	100,000 00	
Oct. 1, 1917,	Harvard Bridge	4s	10,000 00	
May 2, 1918,	Schoolhouse	3 1-2s	100,000 00	
May 2, 1918,	Street	3 1-2s	15,000 00	
June 1, 1918,	Schoolhouse	3 1-2s	50,000 00	
July 1, 1918,	Harvard Bridge	4s	100,000 00	
Aug. 1, 1918,	Schoolhouse	3 1-2s	142,000 00	
Sept. 1, 1918,	Harvard Bridge	4s	100,000 00	
March 1, 1919,	Harvard Bridge	4s	115,000 00	
July 1, 1919,	Schoolhouse	3 1-2s	42,000 00	
Nov. 1, 1919,	Street	3 1-2s	5,000 00	
Nov. 1, 1919,	Schoolhouse	3 1-2s	13,000 00	
Nov. 1, 1920,	Harvard Bridge	4s	5,000 00	
July 1, 1921,	Harvard Bridge	4s	60,000 00	
Aug. 1, 1923,	"	4s	10,000 00	
Feb. 1, 1924,	Park	4s	360,000 00	
Aug. 1, 1924,	Sewer	4s	75,000 00	
Oct. 1, 1925,	"	4s	60,000 00	
Aug. 1, 1926,	Park	4s	100,000 00	
Oct. 1, 1926,	"	4s	40,000 00	
Nov. 1, 1929,	Sewer	3 1-2s	42,000 00	
Aug. 1, 1935,	Park	4s	100,000 00	
Feb. 1, 1936,	"	4s	100,000 00	
Sept. 1, 1937,	"	3 1-2s	100,000 00	
Nov. 1, 1937,	Charles River Improvement	3 1-2s	50,000 00	
June 1, 1938,	Park	3 1-2s	50,000 00	
Aug. 1, 1938,	"	3 1-2s	50,000 00	
Aug. 1, 1938,	Charles River Improvement	3 1-2s	50,000 00	
July 1, 1939,	Cambridge Bridge	3 1-2s	50,000 00	
Aug. 1, 1939,	Park	3 1-2s	100,000 00	
				$4,350,400 00

The net municipal debt is 3.772 per cent on the net valuation of 1899.

Purposes for which the outstanding bonds were issued : —

Erection of Schoolhouses	$898,500 00	
Building of Bridges	465,000 00	
For Sewers	909,000 00	
For Streets	497,000 00	
Erection of Public Buildings	185,000 00	
Parks	1,100,000 00	
Cemetery Lands	65,000 00	
Clay Lands	97,000 00	
City Loans	133,900 00	
		$4,350,400 00

From the above it will be seen that there has been a large increase of the Fund since our last report, amounting to $150,372.19. This was owing to the small amount of City Bonds ($8,000.00 only) maturing the present year. City Bonds (three and a half per cent) have been issued to the amount of $346,000.00 for the following purposes, viz. :

City Loan Bonds to the amount of $77,000.00, payable in 10 years.
Clay Land Bonds to the amount of $17,000.00, payable in 15 years.
Schoolhouse Bonds to the amount of $55,000.00, payable in 20 years.
Street Loan Bonds to the amount of $5,000.00, payable in 20 years.
Sewer Loan Bonds to the amount of $42,000.00, payable in 30 years.
Park Loan Bonds to the amount of $100,000.00, payable in 40 years.
Cambridge Bridge Bonds to the amount of $50,000.00, payable in 40 years.

Street widening Bonds (four per cent.) to the amount of $8,000.00 matured November 1st, and were paid from this fund. The total amount of City Debt proper now outstanding is $4,350,400.00, from which deducting the present assets of the Fund at their par value, $930,733.90, leaves the net amount of Bonded Debt, November 30th, 1899, exclusive of the Water Debt, $3,419,666.10, showing an increase of debt for the year above the earnings of the Fund of $187,627.81. The valuation of the City as returned by the Assessors for 1899 is $91,542,795.00, which shows an increase of $1,991,705.00 over the valuation of 1898. There will be due the Fund from taxation for 1900, the sum of $147,000.00. There will mature in 1900, City Bonds to the amount of $100,000.00. Since 1876 City Bonds have matured to the amount of $3,063,000.00, all of which have been paid from this Fund, without in any case a renewal of the debt, and it is a great satisfaction to this Board that no loss of principal or interest has ever occurred during the past twenty-four years of the large amounts, numbering several millions, which they have been called upon to invest. We would again repeat that the Fund is in excellent condition, all of the securities being in every respect undoubted and first-class.

The following table shows the amount of bonds issued for the past six years for city purposes, with the amounts paid from the Fund for matured bonds, also the net amount of the debt for each year during this period, and the net valuation of the City for each year.

Bonds Issued.	Amount.	Bonds Paid.	Net Debt.	Net Valuation.
In 1894.....	$635,000 00	$130,000 00	$2,092,710 95	$76,091,754 00
In 1895.....	280,000 00	245,000 00	2,244,183 47	80,059,191 00
In 1896.....	611,000 00	54,000 00	2,731,331 76	83,014,751 00
In 1897..	310,500 00		2,908,526 09	85,736,730 00
In 1898.....	471,900 00	83 000 00	3,232,038 29	89,551,090 00
In 1899.....	346,000 00	8,000 00	3,419,666 10	91,542,795 00
	$2,654,400 00	$520,000 00		

Total bonds issued in six years	$2,654,400 00
Total bonds paid in six years	520,000 00

Respectfully submitted.

CHAS. H. SAUNDERS,
FRANK A. ALLEN,
GEO. H. HOWARD,
ANDREW J. LOVELL,
J. HENRY RUSSELL,
JOHN C. BULLARD,

Commissioners of the Sinking Funds of the City of Cambridge.

Cambridge, December 18, 1899.

REPORT OF THE TRUSTEES OF THE SINKING FUND OF THE CAMBRIDGE WATER WORKS

To the Honorable, the City Council: —

The undersigned, Trustees of the Sinking Fund of the Water Works, herewith submit their annual report of the fund committed by law to their charge. The report covers the year ending November 30, 1899.

DR.

Amount of the Fund, November 30, 1898	$345,396 78	
Received during the year, as follows: —		
From the Treasurer of the City of Cambridge, the annual required appropriation from the water rates	113,718 50	
From interest on investments	14,125 09	
		$473,240 37

CR.

Amount paid for interest on investments purchased . .	$435 30	
Amount paid for premium on investments purchased .	7,221 25	
Leaving the amount of the fund, November 30, 1899 . .	465,583 82	
		$473,240 37

EDGAR R. CHAMPLIN,
WILLIAM F. BROOKS,
WM. W. DALLINGER,
Trustees of the Sinking Fund of the Cambridge Water Works.

The following are the investments belonging to the funds:

Cambridge	4s,	Maturing	Feb. 1, 1913	$2,000 00	
"	4s,	"	Oct. 1, 1916	65,100 00	
"	3 1-2s,	"	Dec. 1, 1917	40,000 00	
"	3 1-2s,	"	Nov. 1, 1919	20,000 00	
"	4s,	"	Nov. 1, 1920	5,000 00	
					$132,100 00
Boston	4s,	"	Apr. 1, 1900	$4,000 00	
Providence, R. I.	5s,	"	July 1, 1906	50,000 00	
Hull	4s,	"	May 1, 1908	5,000 00	
Methuen	4s,	"	Aug. 1, 1908	10,000 00	

New Bedford	3 1-2s,	maturing	Feb. 1, 1909	$16,000 00	
Methuen	4s,	"	Aug. 1, 1909	15,000 00	
Somerville	4s,	"	July 1, 1910	8,000 00	
Wellesley	4s,	"	Mar. 1, 1917	2,000 00	
Waltham	4s,	"	Apr. 1, 1917	24,000 00	
Hallowell, Me.	4s,	"	Jan. 1, 1918	15,000 00	
Wellesley	4s,	"	Mar. 1, 1918	1,000 00	
Penobscot Shore Line R. R. Co.	4s,	"	Aug. 1, 1920	25,000 00	
Quincy	4s,	"	May 1, 1923	2,000 00	
"	4s,	"	May 1, 1924	1,000 00	
"	4s,	"	May 1, 1925	2,000 00	
"	4s,	"	May 1, 1926	3,000 00	
"	4s,	"	May 1, 1927	3,000 00	
Attleborough	4s,	"	July 1, 1927	10,000 00	
Quincy	4s,	"	May 1, 1928	3,000 00	
Winchester	4s,	"	June 1, 1928	6,000 00	
Quincy	4s,	"	May 1, 1929	3,000 00	
Fall River	3 1-2s,	"	Nov. 1, 1929	75,000 00	
Quincy	4s,	"	May 1, 1930	3,000 00	
"	4s,	"	May 1, 1931	3,000 00	
"	4s,	"	May 1, 1932	1,000 00	
Newton	4s,	"	Aug. 1, 1935	2,000 00	
"	4s,	"	July 1, 1936	11,000 00	
Grafton	3 1-2s,	"	July 1, 1937	1,000 00	
Old Colony R. R. Co.	4s,	"	Jan. 1, 1938	25,000 00	
Grafton	3 1-2s,	"	July 1, 1938	2,000 00	
"	3 1-2s,	"	July 1, 1939	2,000 00	
					$333,000 00
					$465,100 00
Cash in Bank					483 82
					$465,583 82

The Bonded Water Debt, which the foregoing fund is to pay, matures as follows: —

Nov. 1, 1906,	3 1-2s	$43,000 00
Oct. 1, 1907,	4s	90,000 00
Nov. 1, 1907,	4s	22,000 00
July 1, 1908,	4s	46,000 00
Aug. 1, 1908,	4s	25,000 00
July 1, 1909,	4s	20,000 00
May 1, 1910,	4s	288,000 00
July 1, 1910,	4s	75,000 00
Sept. 1, 1910,	4s	125,000 00
Jan. 1, 1911,	4s	20,000 00
Oct. 1, 1911,	4s	35,000 00
Jan. 1, 1912,	4s	150,000 00
May 2, 1912,	4s	75,000 00
Nov. 1, 1912,	4s	45,000 00
Feb. 1, 1913,	4s	100,000 00
Aug. 1, 1913,	4s	50,000 00
Apr. 1, 1915,	4s	200,000 00
Aug. 1, 1915,	4s	200,000 00

Apr. 1, 1916,	4s	$100,000 00	
July 1, 1916,	4s	200,000 00	
Aug. 1, 1916,	4s	100,000 00	
Oct. 1, 1916,	4s	265,100 00	
Apr. 1, 1917,	3 1-2s	200,000 00	
July 1, 1917,	3 1-2s	100,000 00	
Nov. 1, 1917,	3 1-2s	75,000 00	
Dec. 1, 1917,	3 1-2s	140,000 00	
May 2, 1918,	3 1-2s	50,000 00	
June 1, 1918,	3 1-2s	60,000 00	
Nov. 1, 1918,	3 1-2s	50,000 00	
Nov. 1, 1919,	3 1-2s	23,000 00	
Apr. 1, 1924,	4s	300,000 00	
			$3,272,100 00

REPORT OF THE SUPERINTENDENT OF STREETS

To the Honorable, the City Council: —

GENTLEMEN: — In accordance with the requirements of the ordinance relating to streets, I have the honor to submit my sixth annual report, for the financial year ending November 30, 1899.

As has been the custom in recent years, for convenience in reference, the accounts of the various appropriations of this department are here given in alphabetical order, as they appear on the City Auditor's monthly statement.

BRIDGES.

Appropriation			$2,400 00
EXPENDED.			
Draw tenders' salaries		$1,487 40	
First Street Bridge: —			
Planking	$168 79		
Repairs	163 05		
		331 84	
Third Street Bridge: —			
Planking	$132 58		
Repairs	18 65		
		151 23	
Sixth Street Bridge: —			
New hoisting gear	$60 00		
Planking	145 60		
Repairs	81 80		
		287 40	
Walden Street Bridge: —			
Planking		72 97	
General Supplies and Sundries		39 16	
			2,370 00
Balance			$30 00

None of the bridges over the Charles River are now under the charge of this department, they having been placed under the control of the Bridge Commissioners of Boston and Cambridge, in 1898.

There remain in the care of this department the three bridges over Broad Canal, at First, Third and Sixth Streets, two over the Fitchburg Railroad, at Walden Street and Huron Avenue, one over the Water Works Pipe Way at Huron Avenue, one over Alewife Brook, at Massachusetts Avenue, and one over Wellington Brook, at Wellington Street.

An examination of these bridges was made at the end of the financial year, and the City Engineer's report of their condition is as follows:

"First Street Bridge should be entirely replanked, the hard pine

under planking being in such a decayed condition, that it will not be safe for another year.

"Third and Sixth Street Bridges may require entire new timbering above the girder caps as some of the timbers show considerable decay, Sixth Street being in the worst condition, and also needing plank on the faces of the draw. All three of these bridges need repainting.

"The Huron Avenue Bridges over the Watertown Branch, Fitchburg Railroad, and over the Pipe Way at Fountain Terrace, are in good condition, and except repainting of the fences, nothing more than the usual repairs will be called for.

"The bridge over Wellington Brook having been rebuilt last season, is now in good condition.

"At Massachusetts Avenue and Alewife Brook, nothing more than paint for the fence will be called for during the ensuing season.

"Walden Street Bridge over the Fitchburg Railroad, on which sheet lead was used last season as a protection for the iron, where the blast from the locomotives was cutting it away, is in fair condition, the lead having almost entirely prevented the destructive action of the engine gases. With the exception of the renewal of this protective covering, and a coat of paint on the fences, but little will be required for repairs for a year to come."

COLLECTION OF ASHES.

Appropriation		$22,000 00
EXPENDED.		
Labor	$18,734 78	
Teaming	173 25	
Hay, grain and straw	1,547 91	
Horses (seven)	1,160 00	
Hardware, tools, etc.	111 66	
Horse and wagon covers	114 00	
Harnesses, dressing, repairs, etc.	116 55	
Bicycles and repairs	41 85	
		$22,000 00

This amount has been expended, as shown above, in the daily collection of ashes, and the collection of yard rakings, tree trimmings, brush, etc., in the spring and fall of the year.

The steady increase in the annual cost of this work may be observed by reference to the following comparative statement for the past five years: —

	Loads collected.	Loads sold.	Carted to dumps, etc.	Total cost.	Labor cost.
1895	35,718	5,355	30,363	$18,749 86	$16,066 29
1896	35,938	10,675	25,263	19,348 26	16,385 75
1897	38,238	7,162	31,112	19,763 37	16,569 50
1898	39,045	1,685	37,360	21,198 55	18,211 48
1899	42,690	110	42,580	22,000 00	18,734 78

As the vacant lots throughout the city are being taken up for building purposes, we are compelled from year to year to cart the loads over longer distances. This, together with the natural growth of the city, increases the annual expense to the extent of more than one thousand dollars per year. We should not, in fact, have been able to collect the ashes of the city within the amount provided, but for a restriction which was made under an amendment to the ordinances, approved April 20, 1899, requiring mercantile and manufacturing establishments to make provision for the disposal of ashes made in the ordinary course of business, leaving the department to provide for the disposal of such ashes as were "accumulated from the burning of materials for heating or domestic purposes only." In a number of cities tenants and householders are required to separate the paper and other light house dirt from ashes and place them in different receptacles for collection by the city carts, and, if some such system were inaugurated in this city, I believe that the work would be greatly facilitated and the annual cost materially reduced. I respectfully recommend that the matter be investigated and such legislation adopted as may be necessary.

CLEANING STREETS.

Appropriation		$35,750 00
EXPENDED.		
Salaries of foremen	$1,037 50	
Labor	31,783 52	
Teaming	1,522 12	
Repairs to sweepers	860 35	
Re-filling sweeping machine brushes, shovels, hoes, brooms, etc.	415 83	
Waste barrels	114 00	
Sundries	16 67	$35,749 99
Balance		01

Included in the above account is the cost of taking care of snow and ice. On Sunday, November 27, of last year we had the heaviest snow storm that has been seen in this vicinity for a number of years. It will be remembered that street car service was almost entirely suspended for two days and that general traffic was interrupted for some time. As the accounts for the financial year of 1898 were then practically closed, the expense of this storm was paid from the above account, very materially increasing the usual amount expended for care of snow and ice, as will be seen by the following comparative statement of the amount thus expended during the past three years: —

	1897.	1898.	1899.
District No. 1 (Wards 2, 3, and 4)	$3,041 50	$3,187 50	$5,380 50
District No. 2 (Wards 1 and 5)	1,834 50	2,563 00	4,001 88
Totals	$4,876 00	$5,750 50	$9,382 38

The appropriation for cleaning streets was larger this year than ever before, and particular attention has been given to this branch of the department.

Immediately after the customary general spring cleaning, the section force was increased from fifteen to twenty-five men, covering nearly all the accepted streets in the City. A sufficient number of teams was detailed to remove the material gathered by the section men, so that piles of dirt should not be left on the streets over night. A new departure was made in sweeping the paved streets; the work was done almost entirely by night, the sweepers beginning at half-past six in the evening and working until five o'clock in the morning. By this plan we were able to go over every paved street three times a week. The advantage of all this work was shown when we began our usual fall cleaning. The gutters were comparatively clean and there was little mud on the streets, so that the work of cleaning up the fallen leaves was lighter than it has ever yet been, and at no time in the history of the City have the streets been in such a cleanly condition at the beginning of the winter season.

The very general use of the waste barrels, placed by the department on the streets throughout the City, has been of considerable assistance in keeping the streets clean. Forty new barrels were purchased during the year to replace those worn out, and to meet the demands for their location in places not already supplied. Further co-operation on the part of the public in this work is earnestly invited and receptacles will be provided upon application to the office at City Hall.

We have received gratifying evidence that our efforts to keep the streets clean at all times throughout the year have been appreciated by our own citizens, and their cleanly condition has been the subject of comment and approval in the press of neighboring Cities. In order that the high standard we have reached in this direction may be hereafter maintained, I trust that the appropriation for this branch of the department may be still further increased, as almost an entire new equipment of street cleaning machinery will be necessary.

MAINTENANCE.

Appropriation		$81,627 40
EXPENDED.		
Salary of Superintendent	$2,000 00	
Clerical assistance	1,746 16	
District foremen and sub-foremen	3,443 83	
Labor	31,670 42	
Injured employees, paid for time lost	496 24	
Teaming	2,461 03	
Car tickets	20 00	
Carriages and wagons, new and repairs	524 05	

Field stone and broken stone	$14, 00 92	
Fuel and lighting	2,062 94	
Gravel, freight and loading	575 00	
Hardware, tools, etc.	2,387 27	
Harnesses, new and repairs, horse clothing, etc.	1,472 80	
Hay, grain and straw	9,397 41	
Horses	580 00	
Paints, oils, etc.	639 11	
Repairs to stables	1,867 87	
Steam rollers, repairs and supplies	2,405 51	
Stone crushers, repairs and supplies	1,038 95	
Telephones, office supplies, etc.	807 96	
Vitrified paving blocks	976 32	
Sundries	79 37	
		81,553 16
Balance		$74 24

As will be seen by reference to the above summary of expenditures, all the general and running expenses of the entire department are charged to this account, more complete details of which may be found in the report of the City Auditor.

While the general impression prevails that the amount appropriated is for the maintenance of streets, the fact is, that a very large part of it is expended for items which enter into the cost of maintaining and operating the department, but which cannot be shown to have been used directly upon the streets. The amount available for actual street work is shown by the following schedule, showing the streets macadamized, resurfaced and repaired in each district, an itemized account of the cost of each street, and the total cost in each district: —

MACADAMIZING AND RESURFACING.

DISTRICT NO. 1.

Amory Street, between Broadway and Summer Street:—

Labor	$27 50	
Teaming	2 25	
Steam roller	10 50	
Gravel	38 50	
		$78 75

Broadway, between Dana Street and Burleigh Street:—

Labor	$386 75	
Teaming	225 00	
Steam roller	117 25	
Cracked stone	625 00	
Gravel	5 75	
		1,359 75
Amount carried forward		$1,438 50

Amount brought forward		$1,438 50
Charles Street, between Third Street and Fourth Street :—		
Labor	$75 50	
Teaming	107 63	
Steam roller	26 25	
Cracked stone	261 25	
Gravel	1 75	
		472 38
Chestnut Street, between Pearl Street and Newton Street :—		
Labor	$38 25	
Teaming	39 38	
Steam roller	15 75	
Cracked stone	62 50	
Gravel	5 00	
		160 88
Erie Street, between Brookline Street and Pearl Street :—		
Labor	$54 00	
Teaming	52 88	
Steam roller	3 50	
Cracked stone	37 50	
Gravel	36 25	
		184 13
Fayette Street, between Cambridge Street and Broadway :—		
Labor	$114 50	
Teaming	61 50	
Steam roller	26 25	
Cracked stone	30 00	
Gravel	37 50	
		269 75
Green Street, between Blanche Street and Lansdowne Street :—		
Labor	$29 50	
		29 50
(117 loads filling from Hampshire Street.)		
Hampshire Street, between Broadway and Somerville Line :—		
Labor	$1,495 50	
Teaming	1,288 50	
Steam roller	413 00	
Cracked stone	3,347 50	
Gravel	2 50	
		6,547 00
Henry Street, between Brookline Street and Waverly Street :—		
Labor	$118 00	
Teaming	161 63	
Steam roller	42 00	
Cracked stone	392 50	
Gravel	6 25	
		720 38
Amoumt carried forward		$9,822 52

Amount brought forward		$9,822 52	
Highland Avenue, between Cambridge Street and Greenough Avenue :—			
Labor	$50 75		
Teaming	36 00		
Steam roller	12 25		
Gravel	18 00		
		117 00	
Lincoln Street, between Elm Street and Webster Avenue :—			
Labor	$9 50		
Steam roller	3 50		
Gravel	26 50		
		39 50	
(106 double loads gravel from Hampshire Street.)			
Massachusetts Avenue, between Dana Street and Central Square :—			
Labor	$474 50		
Teaming	431 63		
Steam roller	141 75		
Cracked stone	747 50		
		1795 38	
River Street, between Central Square and the Bridge :—			
Labor	$132 50		
Teaming	150 38		
Steam roller	24 50		
Cracked stone	11 25		
Gravel	36 00		
		354 63	
(Material from Prospect Street used also.)			
Sixth Street, between Broadway and Binney Street :—			
Labor	$319 00		
Teaming	216 75		
Steam roller	98 00		
Cracked stone	903 75		
		1,537 50	
Union Street, between Lincoln Street and Hampshire Street :—			
Labor	$29 50		
Teaming	4 50		
Steam roller	5 25		
Gravel	27 00		
		66 25	
Vine Street, between Third Street and Sixth Street :—			
Labor	$269 75		
Teaming	335 25		
Steam roller	78 75		
Cracked stone	712 50		
Gravel	13 50		
		1,409 75	
Total, District No. 1			$15,142 53
Amount carried forward			$15,142 53

Amount brought forward			$15,142 53

DISTRICT NO. 2.

Broadway, between Quincy Street and Dana Street:—

Labor	$172 00	
Teaming	186 75	
Steam roller	80 50	
Cracked stone	277 50	
Gravel	9 25	
		726 00

(148 double loads gravel from Boston Elevated Railway Company.)

Concord Avenue, between Huron Avenue and Walden Street:—

Labor	$464 50	
Teaming	384 76	
Steam roller	145 25	
Cracked stone	847 50	
Gravel	40 50	
		1,882 51

De Wolfe Street, between Mount Auburn Street and Dyke Street;

Labor	$12 50	
Teaming	23 63	
Steam roller	5 25	
		41 38

(154 double loads gravel from Massachusetts Avenue.)

Dyke Street, between Plympton Street and the end:

Labor	$8 50	
		8 50

(34 double loads gravel from Massachusetts Avenue.)

Garden Street, between Massachusetts Avenue and Huron Avenue:

Labor	$407 50	
Teaming	321 75	
Steam roller	99 75	
Cracked stone	607 50	
Gravel	13 75	
		1,450 25

Huron Avenue, between Fresh Pond Lane and Appleton Street:—

Labor	$68 50	
Teaming	34 88	
Steam roller	36 75	
Gravel	9 50	
		149 63

(213 double loads gravel from Boston Elevated Railway Company.)

Amounts carried forward	$4,258 27	$15,142 53

Amounts brought forward	$4,258 27	$15,142 53
Huron Avenue, between Concord Avenue and Sparks Street:—		
Labor $59 00		
Teaming 104 63		
Steam roller 54 25		
Cracked stone 320 00		
Gravel 7 00		
	544 88	
Irving Street, between Cambridge Street and Kirkland Street:—		
Labor $77 00		
Teaming 65 25		
Steam roller 24 50		
Gravel 31 75		
	198 50	
Larch Street:—		
Labor $9 50		
	9 50	
(234 double loads gravel from Boston Elevated Railway Co.)		
Linnaean Street, between Avon Street and Raymond Street:—		
Labor $104 50		
Teaming 67 13		
Steam roller 38 50		
Cracked stone 261 25		
	471 38	
Massachusetts Avenue, between Dana Street and Harvard Street:—		
Labor $524 00		
Teaming 433 13		
Steam roller 166 25		
Cracked stone 775 00		
	1,898 38	
Massachusetts Avenue, between Garden Street and Porter's Station Bridge:—		
Labor $1,977 50		
Teaming 1,972 88		
Steam roller 493 50		
Cracked stone 4,617 50		
	9,061 38	
Norris Street:—		
Labor $13 00		
Teaming 4 50		
	17 50	
(102 double loads gravel from Massachusetts Avenue.)		
Amounts carried forward	$16,459 79	$15,142 53

Amounts brought forward		$16,459 79	$15,142 53
Nutting Place, from Mt. Auburn Street: —			
Labor	$175 50		
Teaming	159 76		
Steam roller	31 50		
Cracked stone	145 00		
Gravel	10 75		
		522 51	
(17 double loads gravel from Massachusetts Avenue.)			
Prentiss Street: —			
Labor	$72 25		
Teaming	154 13		
Steam roller	19 25		
Cracked stone	160 00		
Gravel	15 75		
		421 38	
Trowbridge Street, between Broadway and Cambridge Street:—			
Labor	$45 00		
Teaming	117 38		
Steam roller	21 00		
Cracked stone	181 25		
Gravel	4 25		
		368 88	
Walden Street, between Raymond Street and Crescent Avenue:—			
Labor	$185 50		
Teaming	142 88		
Steam roller	64 75		
Cracked stone	722 50		
Gravel	12 25		
		1,127 88	
Walker Street, between Shepard Street and Garden Street:—			
Labor	$7 50		
Teaming	10 50		
Steam roller	7 00		
Cracked stone	31 25		
		56 25	
Ware St.			
Labor	$40 50		
Teaming	30 38		
Steam roller	10 50		
Gravel	17 75		
		99 13	
Amounts carried forward		$19,055 82	$15,142 53

Amounts brought forward		$19,055 82	$15,142 53
Changing Street lines at Cambridge, Kirkland and Peabody Streets:—			
Labor	$485 56		
Teaming	206 25		
Steam roller	29 75		
Cracked stone	262 50		
Gravel	17 00		
		1,001 06	
Completing vitrified block paving at Harvard Square:—			
Labor	$217 30		
Teaming	411 37		
Vitrified paving blocks	976 32		
Cement	71 68		
Concrete stone	171 52		
Lumber	28 26		
		1,876 45	
Total District 2			21,933 33
Total Districts 1 and 2			$37,075 86

The amount expended, in addition to that shown above, for patching and minute repairs on all of the streets in the city is $9,157.10, and for removing trees on Prospect Street, $334.31, making a total of $46,567.27 expended directly on the streets. The sum expended for patching is considerably smaller than usual, partly on account of the work done by the section men, keeping the streets in such condition that the wear has been reduced, and partly on account of the careful attention given during the past few years to resurfacing and macadamizing. It has been the policy of the department to do as much thorough construction as possible each year, and in pursuance of that policy two of our main thoroughfares, viz.:— Hampshire Street, entire, and Massachusetts Avenue, from Linnaean Street to Harvard Square, have been surfaced in a very thorough manner, nearly two-fifths of the entire amount expended for macadamizing, etc., having been laid out on these two streets.

Massachusetts Avenue, from the Arlington line to Harvard Square, is now in good condition. A heavy Telford construction has been put in from the Arlington line to Porter's Station, and from Linnaean Street to Harvard Square it has been macadamized to a depth of eight inches. Sixty-nine thousand dollars have been expended on this part of the avenue during the past three years and, with the exception of the section between Linnaean Street and Porter's Station, we expect that no further outlay will be required there for several years.

During the past year we have expended a very large sum on repairs to our steam rollers, yet on account of the constant strain put upon them

by reason of the amount of work done, they are all three at the close of the season in a disabled condition. In view of the increasing amount of macadamizing and resurfacing being done, I do not see how we can possibly get along another year without a new steam roller, and I recommend that provision be made for one next year.

A new boiler will be required at the Raymond Street stone crushing plant, extensive repairs are needed on the sheds at the Hampshire Street yard, and the stalls at the stable there should be all taken out and new ones built; all these large expenditures must be provided for in the maintenance appropriation for next year, which should be much larger if we desire to keep up the average amount annually expended on the streets.

Following is a list of the streets laid out and accepted during the past year : —

Streets laid out between December 1, 1898, and December 1, 1899.

NAME.	FROM	TO	Length in feet.	Width in feet.	Date of Acceptance.
Albany Street	Massachusetts Avenue	Easterly line of Erie Street	2286	50	Nov. 23, 1899
Buena Vista Park	Richdale Avenue	Northerly end of Buena Vista Park	180	30	June 15, 1899
Carver Street	Sacramento Street	Museum Street	496	40	June 15, 1899
Erie Street	Brookline Street	Albany Street	1000	40	Nov. 23, 1899
Grigg Street	Putnam Avenue	Hews Street	225	40	June 15, 1899
Green Street	Sidney Street	Blanche Street	142	40	Oct. 27, 1899
Kirkland Road	Kirkland Street	Southerly	230	30	June 15, 1899
Prentiss Street	Massachusetts Avenue	Frost Street	414	30	Dec. 31, 1898
Wyman Street	Avon Hill Street	Westerly	160	40	Aug. 15, 1899

Total length of accepted streets December 1, 1898, 89.721 miles.

Total length of streets accepted from December 1, 1898, to December 1, 1899, 5133 feet or 0.972 miles; making a total of 90.693 miles.

NEW STREETS, CLAY LAND DISTRICT.

Appropriation		$21,000 00
EXPENDED.		
Labor	$4,185 10	
Teaming	1,641 64	
Coarse gravel, as per contract	2,406 38	
Transportation of gravel, as per contract	1,229 34	
Freight on gravel and filling	192 00	
Land and damages	75 00	
Gravel and filling	520 38	
Lumber pipe and cement	217 35	
Hardware, tools, etc.	30 35	
Catch basin frames and traps	508 30	
Field stone	266 70	
Edgestone	121 76	
Bricks	386 54	
Cutting stone	126 00	
		11,906 84
Balance		$9,093 16

By an order approved July 2, 1896, thirteen new streets, six forty feet wide, and seven fifty feet wide, were laid out through land owned by the Bay State Brick Company, on the northerly side of Concord Avenue, between Walden Street and New Street.

In 1897, these streets were filled to grade with material from the City's gravel bank, at South Acton, and in 1898 sewers were built through all the streets.

During the past year, twelve of the streets have been surfaced with gravel and one, Garden Street, upon which there is considerable travel, was macadamized to a depth of about eighteen inches. Sidewalks have been built on all the streets and surface drainage has been provided for by the construction of thirty-nine catch-basins. As we were able to obtain the gravel for this work at an unexpectedly low figure, there will remain quite a large unexpended balance after the 25 per cent. reserve on contracts has been paid.

These streets now being in good condition, it would seem that their further care and repair should be charged to our regular maintenance appropriation, and that the above unexpended balance might be paid into the sinking fund account.

Following is a list of the streets with the length and width of each:

	Width.	Length.
Alpine Street	50 feet	337.5 feet
Bay State Road	50 "	798.7 "
Birch Street	50 "	425.9 "
Chilton Street	50 "	375.2 "
Dale Street	50 "	400.0 "
Fayerweather Street	50 "	961.6 "
Fern Street	50 "	465.9 "
Copley Street	40 "	524.5 "
Field Street	40 "	1,232.0 "
Garden Street	40 "	1,266.8 "
Hazel Street	40 "	258.0 "
Ivy Street	40 "	251.1 "
New Street	40 "	500.0 "
Total length		7,797.2 feet

PAVING, EDGESTONES AND SIDEWALKS.

Appropriation		$22,500 00
EXPENDED.		
Salary of foreman	$294 00	
Labor	7,580 51	
Teaming	1,258 90	
Bricks	4,440 15	
Edgestones and circles	6,826 47	
Gutter and round stone	246 11	
Freight and loading gravel from bank at Acton	628 80	
Allowance on artificial stone sidewalks	934 18	
Recutting paving blocks	87 72	
Lumber, cement and sundries	137 68	
		22,434 52
Balance		$65 48

Until the present year it has been the custom to charge all sidewalk work, as well as crossings, gutters, etc., under the above heading.

In order to easily determine the amount available for new brick sidewalks and edgestones, two appropriations for "Paving" were made this year, one for "Paving, Edgestones and Sidewalks," to which was charged the expense of all new edgestones and brick sidewalks, and the other, "Paving, Crossings, Repairs, etc.," out of which, as the heading indicates, all crossing work and repairs were done.

The following tables show by districts the new sidewalk work done during the year, viz., the number of feet of new circles and edgestones set, and square yards of new brick sidewalk laid, with the expense on each street: —

District No. 1.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Auburn Street, No. 154	52			$58 09
Brookline Street, at north-west corner of Watson Street	4.6	9.5		38 34
Brookline Street, south-west corner of Lopez Street	12.5	9.5		30 06
Brookline Street, south-west and north-west corners of Decatur Street	20	19		73 32
Brookline Street, both corners of Valentine Street	16.8	19		48 03
Brookline Street, south-west corner of Erie Street	14	9.5		28 90
Cambridge Street, No. 1,012 to No. 1,020			80.2	78 01
Chestnut Street, between Brookline Street and Sidney Street			303	221 18
Chestnut Street, between Magazine Street and Pearl Street	168		326 5	491 10
Davis Street, No 8			12	11 87
Douglas Street, No. 8			27	30 31
Glenwood Avenue, between Magazine Street and Pearl Street	949	9.5		922 31
Hampshire Street, junction of Broadway	13.6			39 32
Harvard Street, between Portland Street and Davis Street			44	36.88
Harvard Street, corner of Windsor Street, at Roberts School	42.8	29.3	367.7	430 63
Harvard Street, No. 50	159.6		117	265 62
Highland Avenue, east side from Cambridge Street, southerly	454.3	19	330	896 06
Hunting Street, from Cambridge Street, northerly			138	128 20
Kinnaird Street, No. 3			54	53 59
Lambert Street, between Cambridge Street and Gore Street, both sides	675		489	1,043 84
Marney Street, between Portland Street and Berkshire Street, both sides	580.4		464.8	908 89
Oak Street, between Cambridge Street and Somerville line	507.5	9.6	297	749 78
Palermo Street, between Willow Street and Windsor Street, both sides	600.6		450.9	888 96
Pine Street, east side, from Harvard Street, 100 feet southerly	111.2		46	137 63
Pleasant Street, east side, junction of River Street			67	77 08
Pleasant Street, between Somerset Street and Putnam Avenue			121.3	308 06
Amounts carried forward	4381 9	133.9	3735.4	$7,996.06

District No. 1 — *Concluded.*

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Amounts brought forward	4381.9	133.9	3,735.4	$7,996.06
Sixth Street, west side, between Charles Street and Broadway	1189.6	101.4	1,192.4	2,221 95
Western Avenue, between No 249 and Dodge Street			233.3	196 40
Franklin Street, at National Biscuit Co.	35		109	236 35
Massachusetts Ave.. near Boston & Albany Railroad Crossing	9.6	15.2	179	232 80
Brookline Street, No. 302			33	42 45
Fifth Street, No. 141	42		44	91 25
Windsor Street, east side, between State Street and Massachusetts Avenue	207.9	9.6		203 61
Total amounts	5866.0	260.1	5,526.1	$11,220.87

District No. 2.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount
Bow Street, between No. 13 and Massachusetts Avenue	185		141 6	$304 35
Bow Street, front of Peter Burns' estate			116	118 30
Cambridge Street, No. 1657 to No 1667	102.6		154	282 19
Cowperthwaite Street, between Banks and De Wolfe Streets, both sides	1,076	47.7		1,115 01
Davenport Street, east side, from Massachusetts Avenue, about 275 feet northerly			150	123 74
Farrar Street, No 9	95		68.5	136 56
Frost Street, No. 73 and No. 75	81.3		41.4	85 70
Hilliard Street, between Hilliard Place and Brattle Street, west side			215	171 22
Hillside Avenue, south side, corner Avon Hill Street	95			92 50
Hubbard Avenue, between No 52 and Raymond Street	67		103	152 94
Huron Avenue, corner Concord Avenue		41.5		73 83
Langdon Street, front of Cobb estate			95	209 94
Linnaean Street, front of Peabody School	222		231	445 51
Lowell Street, at Lowell School	103.8		9	83 95
Massachusetts Avenue, No. 2451		38		63 48
Mt. Vernon Street, No. 50	89			106 42
Norris Street, between Massachusetts Avenue and Cedar Street	1,052.5		783.5	1,497 25
Plympton Street, between Mt. Auburn Street and Massachusetts Avenue	1,136	29.8	833	1,546 83
Plympton Street, front of Peter Burns' estate			51	49 77
Prentiss Street, between Massachusetts Avenue and Frost Street	842	57	459	1,254 20
Raymond Street, east side, between Upland Road and Bellevue Avenue			124	65 07
Somerville Avenue, north side, between White Street and Somerville Line	270.7		518	619 52
South Street, south side, corner Holyoke Street,	28.6			40 19
Story Street, west side, between Mt. Auburn Street and Brattle Street	10		256.4	224 82
Upland Road, between Raymond Street and Avon Hill Street			314	264 34
Whittier Street, between Upland Road and Walden Street	365.8	9.5	252	609 27
Wyman Street	327	9 5		296 98
	6,149.3	233.0	4,915.4	$10,033 88

Although the amount of new sidewalk work done this season is a little above the yearly average, the amount of uncompleted work on hand is considerably larger than usual. There are sixteen petitions awaiting action in the files of the Committee on Roads and Bridges, and we have orders passed by the City Government for several long stretches of new sidewalks which we were unable to lay this year. To complete these petitions and orders on hand will require about $10,000, and the usual amount appropriated for this work should be increased next year by at least that amount.

Following is a list of streets where artificial stone and concrete sidewalks have been laid during the past year:

ARTIFICIAL STONE SIDEWALKS.

Street.	Square Yards.
Auburn Street, No. 154	38
Buena Vista Park	41.9
Buena Vista Park	14 6
Broadway, No. 315, (concrete)	226.48
Concord Avenue	76.1
Craigie Street, No. 3	53
Craigie Street, No. 19	59.8
Craigie Street, No. 21	46
Follen Street	42.7
Follen Street	40.1
Follen Street	35.6
Fayerweather Street, No. 6	36
Fayerweather Street, No. 8	176 9
Highland Street, Nos. 11 and 17	120.23
Highland Avenue, (60 feet curb also)	40
Massachusetts Avenue, No. 770	79 4
Massachusetts Avenue, corner Shepard Street	346.1
Reservoir Street, No. 12	97.1
Shepard Street, corner Massachusetts Avenue	64.1
Sparks Street, No. 76	59.4
Total	1,693.51

PAVING — CROSSINGS, REPAIRS, ETC.

Appropriation		$10,000 00
EXPENDED.		
Salary of foreman	$126 00	
Labor	6,719 24	
Teaming	397 13	
Flagging stone	1,755 61	
Granite paving blocks	377 12	
Gravel from City bank (freight and loading)	238 50	
Lumber, cement, etc.	55 71	
Concrete crossing work	330 33	
		9,999 64
Balance		$0 36

The above amount was expended for laying and repairing crossings resetting edgestones, relaying brick sidewalks and gutters. This is the amount usually expended for this purpose, and as the number and extent of brick sidewalks increase, the appropriation required for repairs will of course be correspondingly larger.

Following is a list of the streets by districts on which crossing work has been done:

CROSSINGS.

District No. 1.

Auburn Street, at west side Brookline Street		$43.48
Broadway, at east side Dana Street		46.44
Broadway, between Cambridge Street and Prospect Street		678.03
Brookline Street, at south side Hamilton Street		39.58
Brookline Street, at south side Valentine Street		50.06
Cambridge Street, near Sumner Street		13.53
Cambridge Street, corner Sixth Street		75.18
Chatham Street, at east side Dana Street		56.67
Chestnut Street, at west side Brookline Street		48.87
Dana Street, at Chatham Street		3.50
Decatur Street, at west side Brookline Street		48.30
Ellsworth Avenue at Cambridge Street	Concrete	31.24
Erie Street, at west side Brookline Street		33.08
Gore Street, at Second Street		7.76
Greenough Avenue, at Highland Avenue	Concrete	27.74
Greenough Avenue, at Ellsworth Avenue	"	26.70
Hamilton Street, at west side Brookline Street		48 76
Harvard Street, at Windsor Street	"	15.63
Hampshire Street, between Inman Street and Broadway		256.19
Lechmere Square		5.01
Lopez Street, at west side Brookline Street		39.38
Massachusetts Avenue, at Clinton Street		7 76
Massachusetts Avenue, between Central Square and Quincy Square		508.65
Pleasant Street, junction Western Avenue		17.76
Potter Street, west side of Sixth		82.25
Prison Point Street, at Bridge Street		49.70
Putnam Avenue, at Grigg Street	Concrete	26 93
River Street, at Blackstone Street		23 39
Valentine Street, at west side Brookline Street		40.24
Watson Street, at west side Brookline Street		43 50
Windsor Street, at Harvard Street	Concrete	59.88
Total District No. 1		$2,455.19

CROSSINGS.

District No. 2.

Banks Street, at Surrey Street	$77 23
Bow Street, at junction Arrow and De Wolfe Streets	57 56
Bow, Junction of Mt. Auburn Street	121 66
Bowdoin Street, at Martin Street	1.75

Cleveland, west side Dana Street ..	$27.53
Concord Avenue, at East Side Huron Avenue	58.90
Ellery Street, at Cambridge Street	29.45
Elmwood Avenue, at Mt. Auburn Street	2.94
Elmwood Avenue at Elmwood Street	3.50
Follen Street, at Concord Avenue	41.50
Garden Street, between Massachusetts Avenue and Arsenal Square	61.25
Holyoke Street, at Mt Auburn Street	2.50
Huron Avenue, at west side Concord Avenue	75 30
Kirkland Street, at Massachusetts Avenue	68.92
Massachusetts Avenue, between Harvard Square and Porter's Station	452.69
Massachusetts Avenue, opposite Church Street	5.80
Massachusetts Avenue, opposite Fitchburg Railroad	2.50
Massachusetts Avenue, at Martin Street	3.31
Massachusetts Avenue, at car station, North Cambridge	6.95
Mill Street, at east side Plympton Street	44.46
Mt. Auburn Street, at Holyoke Street	142.40
Mt. Auburn Street, at east side Ash Street	9.73
Mt. Auburn Street, at Claverly Hall	124 43
Orchard Street, at north side Blake Street	47.36
Oxford Street, at Wendell Street	44 47
Prentiss Street, at Massachusetts Avenue	49.72
Putnam Avenue, front of estate of Reversible Collar Company	51.22
Surrey Street, at Banks Street	57.04
Trowbridge Street, at Latin High School	59 43
Wyman Street, at south side Avon Hill Street	51.36
Total District No. 2	$1,782 86

THE STREET RAILWAY TAX.

By an Act of the Legislature of 1898 (Chapter 578), a change was made in the method of the distribution of the annual franchise tax of street railway corporations. Under the old law the tax was distributed among the towns and cities in which the shareholders lived, and in 1897, Cambridge received but $9,474.35. The new law provides that the tax shall be distributed among the cities and towns through which the companies operate their cars, and the amount paid to each city or town is based on the number of miles of tracks in the public ways on September 30 of the preceding year. By the operation of the new law Cambridge received in December, 1898, $50,965.53.

Section 10 of the act provides that all amounts paid to cities and towns under the act shall be applied towards the construction, repair and maintenance of the public ways, and removal of snow therefrom, within such cities and towns.

The question as to how the amount received under this law should be appropriated was referred to the Committee on Roads and Bridges, and in the consideration of the matter the opinion seemed to be general

that the greater part of it should be applied to the permanent construction of such streets as might be termed thoroughfares, which were in bad repair and which required large annual expense to keep in even fair condition.

In the discussion of the best methods of construction it was, I think, unanimously decided that some form of paving was required for the streets under consideration, and a great deal of time and thought were given to the selection of a proper material for a durable, and at the same time, economical pavement.

The question of properly paving streets is one of more than ordinary importance, involving the health, comfort, and safety of the community, as well as considerations of durability, and of economy, both as to first cost and as to maintenance.

It may be stated as a general proposition that the first requisite to a street pavement is that it affords a safe and agreeable roadway for horses and vehicles. By an agreeable roadway we mean not only one which is pleasant to those driving over it, but also one which facilitates the traction of loaded vehicles as much as possible without being slippery or unsafe. A further consideration to be borne in mind is that the pavement be so constructed as to be durable. Having conserved these two requirements, we have gone a long way toward solving the problem of a satisfactory pavement.

There are also certain other considerations which, while they are of less importance, nevertheless largely enter into the selection of a paving material. The pavement should be as nearly noiseless as possible; it should be sufficiently low in cost to warrant its use, and it should be so laid that sections may be removed when necessary without great cost and without impairing the value of the surrounding pavement. It should further be of such a nature that it will not absorb liquids, gases, or street filth. It is also of great importance that pavements be so constructed that, while sufficiently hard and rigid to enable them to sustain the heaviest loads, they will, at the same time, not be so hard as to injure the feet of horses.

A street pavement is made up of several component parts, each having its own function. The foundation gives to the pavement the strength and rigidity necessary to withstand heavy loads and the continual impact of traffic. Upon this should be placed a properly cushioned bearing surface which does not primarily support the loads but serves to transmit the weight of these loads to the foundation. This bearing surface must be smooth and lasting. Unless, however, the pressure be properly distributed over the sub-grade, by the foundation, the best paving materials are of little value.

Bearing in mind, then, that the function of the foundation is to transmit the weight of passing loads to the ground beneath, and that of the pavement proper to receive these loads and properly transmit them to the foundation, at the same time affording a safe, smooth, and durable pavement, we are led to the consideration of the question, — what material will best answer this purpose? The opinion is wide-spread among engineers and others interested in street paving — and this opinion is rapidly becoming more general — that vitrified brick most nearly fulfils these requisites.

We were able, by correspondence and otherwise, to obtain a great deal of general information in relation to the use of vitrified brick in other cities; but there were no cities in our immediate vicinity where a practical illustration of the merits of vitrified brick as a pavement could be demonstrated. The committee therefore reported to the City Council, asking that they be given authority to visit other cities, and that an appropriation be made for that purpose.

An appropriation of $350 having been made by order of the City Council, a number of cities outside of the State were visited, and in view of the widespread interest in the subject the report of the committee on the "results achieved by the use of vitrified brick pavement" is here given in full, as follows: —

IN BOARD OF ALDERMEN,
July 11, 1899.

To the Honorable, the City Council:—

GENTLEMEN:—By an order concurred in June 20, 1899, the joint and standing committee on roads and bridges in connection with the City Engineer and the Superintendent of Streets were authorized to make "such investigation as may be deemed necessary as to the results achieved in various cities by the use of vitrified brick pavement;" and for this purpose a sum not exceeding three hundred and fifty ($350 00) dollars was appropriated. With the view of ascertaining what might be learned from the experience and practice of other cities in this matter, a majority of the committee with the City Engineer and the Superietendent of Streets left the City on the morning of Monday, June 26, 1899, for a tour of inspection, visiting in turn the cities of Springfield, Mass.; Albany, Rochester, Buffalo and Niagara, New York; Cleveland and Canton, Ohio; and Catskill, New York, returning to Cambridge on Sunday, July 2, 1899.

At each of the places visited the officials of the City and representatives of brick manufactories extended to us every courtesy and facility for inspection of the pavements laid of both recent and earliest dates; also, through the courtesy of J. L. Higley & Co., of Canton, Ohio, and the Eastern Paving Brick Company at Catskill, N. Y., their plants were visited, and the very interesting process of manufacturing paving bricks, from the clay and shale pits to the loading for shipment, were carefully inspected.

At Springfield, Mass, there are about one and two-thirds miles of brick paving, all laid with a small light colored brick made at Syracuse, N. Y., some of it on streets having rather heavy traffic. The oldest pavement of brick seen in this City

was laid in 1892; the most recent in 1897. The general appearance of the pavement was very satisfactory and none showed the effects of wear from traffic, except in a slight degree. On one street paved in 1896, a loud, rumbling noise was very noticeable as teams passed over certain places in the pavement. This noise seemed very objectionable. It was caused, as we were informed by the City Engineer, by a settlement or falling away of the earth from the foundations, or by expansion of the brick pavement separating it from the concrete base.

In Albany, N. Y., about fifteen miles of brick pavement have been laid, mostly since 1895. Some of the streets here have heavy grades. Swan Street has a grade of 9.42 feet per 100, and at the top is located a large engine house of the Albany fire department. This street was paved in 1896 with brick from Catskill, N. Y., and now looks well. It could not be learned from teamsters and drivers that any trouble was experienced from slipping by horses on as heavy a grade as that. The bricks observed here came from Canton, O., Catskill, N. Y., and Corning, N. Y., and were placed in streets with moderately heavy traffic. All the bricks seen showed but little effects of wear, although some were chipped on the edges. The pavements are laid with a concrete base six inches thick, and the joints between the brick filled with Portland cement.

In Rochester, N. Y., a brick pavement was shown, laid in 1891, on a street called Eastern Avenue. This street carries a heavy traffic, and the pavement, laid under a five year guarantee, was in very good condition. Another street, named E. Main Street, paved with brick made in Hornellsville, N. Y., was laid with cement joints, and every thirty feet a number of joints filled with asphalt or coal tar pitch, also a joint at each curb running lengthwise with it. This was done to prevent the rumbling noise. The street has a street railway track with grooved rail, and looked very well.

At Buffalo a great variety of different makes of brick were seen. On Purdy Street the pavement was laid in 1891, of Syracuse brick. They appeared worn on the edges considerably, but the pavement seemed good for many years more of service.

At Tonawanda, a town just north of Buffalo, several long streets paved with brick were noted. This paving had been laid seven years and presented a beautiful appearance, being of a light yellow or buff color and showed but little effect of wear; the travel being apparently light, although there were two street railway tracks in some of the streets.

Cleveland, O., has about fifty-two miles of streets paved with brick. Many of these were examined while we were there. The street with oldest paving visited was a small portion of Wade Park Avenue. This was paved in 1889 with a common building brick, and is now badly chipped on edges and somewhat worn. Van Ness Avenue, paved in 1890, with Canton brick, was in fair condition. Handy Street, paved in 1891, with the "Porter" brick, was somewhat worn, but still good for several years more wear.

Two streets were especially noted, as the conditions were very similar to those which obtained at Prospect Street at Cambridge. They were Lexington Avenue and Dunham Avenue, both paved in 1896, and carrying rather heavy traffic. The two car tracks were paved with rather rough stone block paving, so that the tendency would be to avoid the center of the street and use the sides. The pavement was of large sized brick, made at Canton, Ohio,—the "Metropolitan block," so-called—laid on a concrete base and the joints filled with Portland cement. This pavement presented a fine appearance. A long section of Wade Park Avenue was paved with the same material in 1898. This street had two tracks and showed scarcely a mark of wear.

All the pavement in Canton, Ohio, is of brick, about 250,000 square yards, or about twelve miles having been laid, mostly of the Canton make of brick. The first laid was in 1888, of small-sized common brick laid on a gravel base. This pavement is badly chipped, although the general shape and condition of the street is still good. As the manufacturers gained experience, the character of the brick improved so that their present product is a great improvement on that of ten years ago. This is plainly seen in the pavements of Canton and Cleveland. One peculiarity of the pavement at Canton is that very little is laid on a concrete base, sand or gravel being considered sufficient for a foundation. Little or no deformation or settlement of the surface was noted on any of the streets. At present the joints are filled with cement with expansion joints of pitch every thirty-six feet. On some streets the spaces between the rails of street railway track are paved with the brick laid lengthways.

With regard to the results of the experience and observation gained by this trip, of which some of the impressions are briefly noted above, it may be said that an opinion was gained in general favorable to the value of brick as at present manufactured for a paving material, if laid in the best manner and under conditions for which it is suited.

While the experience with paving brick has not yet covered as long a period as that with granite blocks or macadam, yet the indications are that for any but the heaviest traffic it possesses many qualities which commend it Its popularity and extensive use in the west, while due in a measure to the lack of other inexpensive paving materials, must yet rest on real merits which are being appreciated by cities in the east as well as west. This is expressed by a letter received from an official of a Massachusetts city, in which he says, "Our people do not want to consider granite blocks, and I have come to believe that the best brick, properly laid and on a right foundation, will stand about as well as granite. It is cheaper in first construction, much smoother and less noisy, and more cheaply replaced when worn out."

PAVING BRICK.

It should be remembered that vitrified paving brick as now made is radically different from the ordinary building brick, and very different from the first paving brick used, both in the material and in the method of manufacture. While the common brick are made of clay which will bear only a moderate degree of heat without becoming thoroughly vitrified or brittle and glassy in character, paving brick is made from materials which require a very high degree of heat to produce the partial vitrification required, and which renders them tough and hard without being brittle, and capable of resisting the impact of street traffic, and so dense as not to be affected by moisture and frost. Paving brick are now generally made of a combination of shale and clay, of fire clay, or a combination of shale and fire clay. Shale is found largely in the middle west, and is a hard, partly-formed slate rock, which on being pulverized and softened with water has the appearance of common clay. At Canton, Ohio, the shale and clay are found in the same bank, the clay near the surface, and the shale beneath.

At Catskill, the two materials are taken from different banks and mixed at the works. Much of the value of a paving brick depends on a proper mixing of the materials in the best proportions. Brick made from shale and clay are dark brown or red in color, hard and dense in texture, and tend to be brittle if over burned or vitrified.

The fire clays used in the manufacture of paving brick are found more generally in the middle and southern States, New Jersey, Pennsylvania and West Virginia.

Brick made from this material are much lighter in color, due to the absence of iron and fluxing elements in the clay; are generally not as dense, with a lower specific gravity, and a greater power of absorption of water. Brick made from fire clay are not generally considered as durable as those made from shale. The fire clay brick examined in the cities visited seem much softer and more liable to wear than the shale brick under heavy traffic Their perfect shape and beautiful color render these brick excellently well adapted for a residence street with light traffic.

After the materials are mixed and ground they are placed in the brick-making machine, and made into bricks of the size required. The clay is pressed from the machine through a die of the size of the brick in a continuous stream and cut by wires into blocks such as will make the required size when dried and burned.

The best size for the brick is a subject about which much diversity of opinion still exists. In general, three sizes are now in use, a small brick size, a larger size or "paver," and the largest size or "block." The two last are the sizes most commonly used, and as to which is the best there seems no general agreement.

As the bricks leave the machine they are rectangular in shape with the sides somewhat rough by having been cut by the wires, and the corners rather sharp.

If desired, the brick are now put into a machine and "repressed," by which the corners and edges are rounded, and a more perfect shape and appearance given to the brick.

Much discussion has been had over this operation as to whether the repressing is a benefit or, as some still claim, a positive injury to the brick. Both "wire cut" and "repressed" pavers were seen in the pavements examined, but no conclusions could be drawn from that, as no difference could be noted in the results of wear, etc. The repressed brick make a smoother and better looking pavement at only a trifling increased cost.

A very important element in the manufacture of a paving brick is a proper burning or degree of vitrification. Properly speaking, a thoroughly vitrified brick would be totally unfit for use as a paver, being glassy and brittle in texture and misshapen in form. It is never attempted to more than partly vitrify a brick, melting the more fusible elements or "fluxes" which form a small percentage of the material and so uniting the more stable elements, silica and alumina, which form the great bulk of the clay, into a hard, durable, homogeneous mass. It is one of the nice operations of the manufacture to give a kiln containing say 100,000 paving brick, just the right degree of heat for from eight to ten days so that the larger part of the brick shall be burned or vitrified to just the right degree. For it is a fact that the limit or range of burning within which the best results are obtained is quite small

The very interesting experiments of Prof. A. Marston, of the Iowa State University, made in 1898, demonstrate this very clearly. One thousand brick each were given by two well known brick manufacturers in the west, for the purpose of experiment and test These brick were sorted into six different grades according to the amount of burning and consequent hardness. In nearly all the tests given, the brick which had had just the right amount of burning, marked No 1, stood higher than those which were burned less or more. It is claimed by some that the introduction of a quantity of fire clay makes the range of burning larger. The necessity for care in burning and in properly selecting the brick to be used for paving was also seen by the results observed on pavements, the brick for which had not been carefully culled.

The lighter colored softer brick, noted in some of the older pavements seen, showed the effects of wear much more than those of a darker, harder character. It is highly desirable that the bricks should all be of one uniform degree of hardness.

This can only be accomplished by the most careful burning, and a thorough selection or culling out of inferior brick before laying.

So far as we could ascertain, and from our observation, it seems that the shale paving brick would be best adapted for the paving of the streets now contemplated in Cambridge.

FILLER.

The character of the material used in filling the joints between the brick has an important influence on the success and durability of a brick pavement. Various materials have been used, sand, paving pitch of coal tar or asphalt, a cement made of ground slag and cement, called "Murphy grout," and Portland cement. Sand while at first making a good filler, being inexpensive and reducing the liability of the pavements being noisy, soon washes out and leaves the edges of the brick unsupported and so much more liable to become chipped. Pitch, unless made very hard, tends to soften too much in hot weather and run towards the low places in the pavements as the gutters, leaving the higher parts unprotected.

The Murphy grout works well in places, being fairly hard and elastic, but is said to be uneven in its results, the filling of this material in places being absolutely worthless.

The best results on the whole seem to be obtained by using a high grade of Portland cement containing the smallest amount of lime in its composition; the presence of the lime increasing the tendency for the filler to swell with age and the absorption of moisture, causing the pavement to rise and lift away from the foundation, and so producing the disagreeable roaring or rumbling noise occasionally heard in an otherwise unobjectionable pavement.

It is now thought that this tendency to lift is remedied by introducing at intervals of 25 or 30 feet across the street, and on both sides of the street at the curb, an expansion joint or pitch, so that any movement of the pavement due to swelling of the filler, or to change in temperature will be taken up by the elasticity of the pitch joints.

FOUNDATION.

Various types of foundations have been tried in the cities of the west. Sand or gravel, cracked stone, and cement concrete are the most common.

For streets with light traffic and with good, natural soil, four inches to six inches of good gravel well compacted, seems to answer Cracked stone in itself does not have much resistance to unequal loading, and the sand cushion on which the brick are laid tends to work into the spaces in the stone, so that the surface of the paving is liable to become out of shape.

The best results have been obtained with a base of cement concrete six inches thick, placed on the ground after it has been excavated to sub grade, and thoroughly compacted by rolling till all soft places are filled up.

Owing to the difficulty in properly replacing a pavement laid as above described when broken into for the purpose of making connections with the common sewer, or putting in a water or gas service pipe, it has been found best to lay all sewers and sewer connections, together with all gas and water pipe connections which are likely to be needed as far as the curb line, so as to reduce to a minimum the likelihood of it being required to break into the pavement for years to come.

In conclusion we would make the following

RECOMMENDATIONS.

1st. That vitrified, repressed shale brick be used as a pavement in Prospect Street, Pearl Street, Portland Street and Harvard Square.

2d. That the particular make of brick to be used be left to the discretion of the Superintendent of Streets.

3d. That authority be granted the Superintendent of Streets to contract for the required amount of paving brick with or without advertising therefor at his discretion.

4th. That the pavement be laid in a base of cement concrete six inches thick, with a cushion of sand about two inches thick between the concrete and brick, and the joints be filled with Portland cement provided with expansion joints of asphalt pitch at proper intervals.

5th. That the work of laying the entire pavement be done by the day by the Superintendent of Streets.

6th. That before the pavement is laid all sewers and sewer connections, water and gas pipes and service connections be required to be laid to the curb line.

7th. That in case it is required at any time to open any street paved with brick pavement, the entire work of making such opening and restoring the pavement be done by the Superintendent of Streets, and the entire expense of such opening and restoration be charged to the party, corporation or department requiring such opening to be made.

ACKNOWLEDGMENTS.

We desire to make acknowledgments for information received, and for courtesies and hospitality extended while at the various cities visited, to Charles M. Slocum, city engineer, Springfield, Mass ; William L. Dickinson, superintendent of streets, Springfield, Mass.; Horace Andrews, city engineer, Albany, N. Y.; E. A. Fisher, city engineer, Rochester, N. Y., James H. Whalen, commissioner of public works, Rochester, N. Y.; W. W. Barnard, superintendent of streets, Rochester, N. Y.; F. V. E. Bardol, city engineer, Buffalo, N. Y.; H. J. March, assistant engineer, Buffalo, N. Y.; L. E. Chapin, city engineer, Canton, O.; M. F. Bramley, contractor, Cleveland, O.

JOHN T. SHEA.
FRANK MCLAUGHLIN.
GEO. H. DINAN.
ALFRED E. HUGHES.
L. M. HASTINGS, *City Engineer.*
C. A. BROWN, *Supt. of Streets.*

In accordance with the recommendations above, an order was passed by the City Council, and approved August 2d, making appropriations for the streets named, as follows:—

Portland Street, between Cambridge Street and Hampshire Street	$19,000 00
Prospect Street, from Massachusetts Avenue to Cambridge Street	16,600 00
Pearl Street, from Massachusetts Avenue, southerly	9,500 00
Harvard Square, westerly side	3,365 53
Total	$48,465 53

The remaining $2,500 was later, by order of the City Council, added to the appropriation for paving, edgestones and sidewalks.

Only two of the above streets were paved with the vitrified bricks, viz., Harvard Square and Prospect Street. Portland Street was paved with granite blocks, and on account of a number of apparentably insur-

mountable objections, we were obliged to defer all work on Pearl Street until next year. During the progress of the work a number of transfers were made from the above schedule of appropriations, so that at the close of the year the account is as follows : —

Total amount received			$50,965 53
EXPENDED.			
Paving, edgestones and sidewalks (Included in account on page 17.)		$2,500 00	
Rebuilding Harvard Square :—			
Salaries of foreman and inspector	$118 00		
Labor	1,287 36		
Teaming	128 25		
Vitrified blocks	1,044 00		
Concrete stone	233 36		
Cement, American	279 00		
Cement, Portland	191 00		
Catch basin frames and covers	44 15		
Lumber	17 09		
Road pitch	22 18		
		3,364 39	
Rebuilding Portland Street :—			
Salaries of foremen	$72 00		
Labor	2,021 31		
Teaming	578 26		
Edgestone	543 32		
Paving blocks (granite)	4,987 68		
Portland cement	72 90		
Freight on gravel from City bank	168 00		
Loading cars at City bank	93 00		
		8,536 47	
Rebuilding Prospect Street :—			
Salaries of foremen and inspector	$351 20		
Labor	7,721 12		
Teaming	2,690 24		
Vitrified blocks	8,695 11		
Concrete stone	1,655 72		
Cement, American, $1,411.20; Portland, $1,093.60	2,504 80		
Road pitch	171 35		
Freight and loading cars, at City gravel bank	683 00		
Hardware, tools, etc.	166 78		
Lumber	54 15		
Oil	39 88		
Repairs to fence	10 08		
Sundries	49 00		
		24,792 43	
Unused vitrified blocks on hand		677 54	
Total expended			$39,870 83
Balance			$11,094 70

Although the number of miles of street railway tracks has increased from 34.96 miles in 1897 to 35.46 in 1898, on account of legal questions at present unsettled, the amount received this year will be smaller, viz.: $47,569 33. If the proceeds of this tax are annually applied to construction of streets after the permanent manner of those above named, we shall be able to accomplish a great deal more than usual out of our regular maintenance appropriation and the steady improvement in the condition of our streets will be at once noticeable.

Harvard Square, on the westerly side from Brattle Street to Garden Street, was paved with vitrified blocks, as shown by the illustration facing the title page.

While the appropriation for Harvard Square was not sufficiently large to pave the section above named, it was thought best that inasmuch as the construction of Massachusetts Avenue naturally ended at Garden Street, to carry the vitrified block paving to that point, charging the difference in cost to the maintenance account, which as reference to that account will show was done.

Prospect Street was also paved with vitrified blocks, from Massachusetts Avenue to Cambridge Street. The laying of double tracks in this street gave us an opportunity for thorough and complete reconstruction. Thirty-nine trees, a number of which projected beyond the sidewalk line into the street and were in some cases dangerous to public travel, were removed at the expense of the Street Railway Company.

In the construction of this street and of Harvard Square, the recommendations of the committee have been closely followed. Sewers, water, and gas mains were all inspected and repaired, or renewed where necessary; every abutter was notified to see that his house connections were in order and informed that no permit to open the street would be granted after the work was completed.

The paving was laid on a six-inch concrete base composed of one part American cement, two parts clean sand and four parts stone, making a firm and solid foundation. At all intersecting streets, the blocks were laid in herring-bone style, as shown by the sketch on the opposite page.

The illustrations of Prospect Street as now completed, show a great improvement in the appearance of the street, and if the paving proves as durable as we have been led to expect, the large outlay there will be fully justified.

Portland Street has been paved with granite blocks from Cambridge Street to Marney Street.

The undeveloped character of the land abutting on this street makes it almost certain that during the next few years frequent opening will be necessary, and for that reason, to build a concrete foundation would be

unwise. Large "Boston" paving blocks have been used, laid upon a gravel foundation, which makes a very satisfactory pavement for streets with heavy traffic. On account of the lateness of the season, we were unable to complete the street as far as intended, and estimates for the continuation of the paving from Marney Street to Main Street will be laid before the city government next year.

STREET WATERING.

Appropriation			$25,500 00
EXPENDED.			
Salary of foreman		$982 67	
Sprinkling Contracts		22,285 45	
Expense of levying assessment.			
Clerical assistance	$91 50		
Books and binding	26 75		
		118 25	
Watering cart repairs.			
Labor	$902 13		
Tanks, springs, attachments, etc.	589 97		
Paint stock, brushes, etc.	170 13		
Hardware, supplies, etc.	211 12		
Lumber	23 04		
		1,896 39	
Hose for carts and stand pipes		$108 63	
Horse		80 00	
Bicycle repairs and sundries		26 60	
			25,497 99
Balance			$2 01

A change in the method of employment of Street Sprinkling Contractors has resulted in increased efficiency in this branch of the department. A uniform price of $75 per month was fixed and responsible and trustworthy persons were selected to the number of forty-five, to each of whom was assigned one cart. The city was laid out into a corresponding number of districts, each averaging a little over two miles of streets, and each contractor was required to keep the streets in his district properly watered at all times, Sundays included.

Notwithstanding the remarkably dry season, complaints have been comparatively few and the service has been the most satisfactory we ever had. It is only fair to say that the work accomplished by the Street Cleaning Division this year has greatly reduced the difficulty of keeping the dust laid, which under ordinary conditions would in such a season have been almost impossible without material increase in the expense of the work.

The addition of the surfaced streets in the Clay Lands district, and the new paving done this year, will make necessary the addition of several new carts, and require a larger appropriation next year.

IN GENERAL.

Beginning February 14th of this year, the horses of all the departments of the city, with the exception of the Fire Department and the Water Department, have been shod at the city stables by the blacksmiths employed in this department. The cost of the shoeing is charged to each department, bills being rendered monthly. The total amount charged to the several departments from the above date to the close of the financial year is $451.90.

The extension of the underground conduits of the Telephone Company, the location through our streets of the Massachusetts Pipe Line Gas Company, and the large amount of construction work done by the Street Railway Company have resulted in frequent and extensive disturbance of the surface of our streets. Under our permit system an exact record is kept of every opening or obstruction, and at the close of this season an inspector was detailed to visit every street in which openings had been made and to report upon their condition. The corporations and others authorized to open streets, in nearly every case very promptly repaired any defects found by the inspector, those which were not attended to at once were repaired by the department at the expense of the party taking out the permit. Negotiations are pending with the Pipe Line Company for the complete resurfacing of Inman Street, through which their two large pipes were laid and which is not at present in a condition satisfactory to the department.

A ten-foot fence has been built around the City yard, at the Raymond Street stable, enabling us to keep the ash dump there in better condition. The privilege of picking over the dump has been sold to a party, and what has formerly been considerable of a nuisance has been turned into a source of revenue to the department.

In accordance with a suggestion in the annual report of last year, an effort has been made to obtain a ledge for the use of this department from which we could obtain stone of a uniform quality for macadamizing and resurfacing streets. Two ledges were found, both in the town of Weston. They were visited by the Committee on Roads and Bridges; samples of the stone were submitted to the State Highway Commission, and tests were made by them of the durability and fitness of the stone for street construction.

The results of the tests and other investigation showed that either of the ledges would produce road material far superior to any we have been

able to obtain in recent years. Questions as to price, conditions, etc., arose and nothing definite has yet been accomplished. I cannot too strongly urge the necessity of some provision being made for an adequate supply of a proper quality of road material. Field stone of good quality is rapidly becoming scarce, and nothing but the purchase of a suitable ledge will result in that uniform character of the surface of our streets which is so essential to a properly constructed, macadamized road. The annual saving in the cost of production of cracked stone and dust from a favorably located and properly equipped ledge would, in a few years, pay for the entire plant, and its installment would permanently settle a problem which is yearly growing more difficult to solve.

By his zealous and constant supervision, His Honor the Mayor has largely contributed to whatever success we have achieved in overcoming the many difficulties met with during the year, and his confidence and encouragement are gratefully appreciated.

Mention should also be made of the valuable assistance rendered by the Committee on Roads and Bridges. Fifty-six meetings of the committee have been held during the last eleven months, and many important matters have been brought to their attention. The unusual tax upon their time has been cheerfully met, and their cordial and helpful attitude toward the department has been a source of gratification and pleasure.

The employees throughout the several branches of the department have very generally given careful attention to their duties, and merit commendation for faithful service.

My acknowledgments are extended to the members of the City Council for their advice and approval, and to the various city officials for their courtesy and consideration.

Following is a schedule of property in charge of this department : —

REAL ESTATE.

City Yard and Stable, Raymond Street : —		
Land	$11,000 00	
Stable, sheds, scales, etc.	33,000 00	
		$44,000 00
City Stable, Hampshire Street : —		
72,661 square feet of land, Assessors' valuation .	$30,000 00	
Stable, sheds and scales, including old police station	17,000 00	
		47,000 00
Yard and Pound, east side of Norfolk Street : —		
39,600 square feet of land, Assessors' valuation . .		12,000 00
Yard and Wharf at River Street : —		
92,800 square feet of land, Assessors' valuation . .		32,000 00
Amount carried forward		$135,000 00

Amount brought forward		$135,000 00
Land at Acton, Mass.:—		
Gravel bank		7,000 00
Total real estate		$142,000 00

PERSONAL PROPERTY.

70 horses	$7,000 00	
48 watering carts	12,000 00	
48 carts (30 single, 18 double)	4,800 00	
65 set of harness	1,625 00	
23 sleds, 2 snow-plows, 1 sleigh	1,350 00	
2 snow levelers, 16 gutter plows	340 00	
1 buggy, 4 foremen's wagons	400 00	
3 tool wagons, 1 bicycle	175 00	
2 hayracks, 1 caravan, 2 pungs	275 00	
3 steam road rollers	4,500 00	
1 two-horse section roller	150 00	
4 road machines	800 00	
2 road scrapers	400 00	
5 street sweepers	150 00	
Stone-crushing plant, Raymond Street yard	5,500 00	
Stone-crushing plant, Hampshire Street yard	6,000 00	
Tools and stable furniture	4,000 00	
Lumber, iron, paints, oils, etc.	1,800 00	
212 feet of straight edgestone	60 48	
248 feet circle edgestone	148 80	
92 linear feet granite flagging	48 93	
37,000 paving blocks	740 00	
30,000 sidewalk bricks	390 00	
35,000 vitrified bricks	980 00	
1,500 tons cracked stone	1,950 00	
		55,583 21
Total		$197,583 21

Respectfully submitted,

CHARLES A. BROWN,
Superintendent of Streets.

REPORT OF THE BOARD OF PARK COMMISSIONERS

To the Honorable, the City Council of the City of Cambridge:—

GENTLEMEN: — The Board of Park Commissioners has the honor to submit herewith its seventh annual report, for the year ending November 30, 1899, and also the sixth annual report of the General Superintendent of Parks, as required by Section 4 of the Ordinance establishing a Park Department.

On September 8, 1899, the Board submitted the following recommendation: —

CAMBRIDGE, September 8, 1899.

To the Honorable, the City Council of the City of Cambridge:—

GENTLEMEN: — The Park Commissioners respectfully recommend that the land around the Washington Elm, recently enclosed by curbing, be placed under their control. Said land is described as follows: —

A parcel of land supposed to belong to a person or persons unknown, being a part of a street or way known as Garden Street; bounded and described as follows: —

Beginning at a point marked "A" on a plan hereinafter mentioned, said point being on the face of the curbing surrounding the Washington Elm, and 13.9 feet northerly from the north line of Mason Street produced and 38 feet easterly from the west line of Garden Street; thence running in a general southerly direction along the face of the curbing 73.39 feet to the tangent point of a curve of 3 feet radius which point is 44.5 feet easterly from the west line of Garden Street and 5.7 feet south of the south line of Mason Street produced; thence southerly and westerly along the face of the curbing by said curved line of 3 feet radius 8.14 feet to a compounding point with a curve of 84 feet radius; thence in a general northerly direction along the face of the curbing by said curved line of 84 feet radius 79.14 feet to a compounding point with a curve of 3 feet radius; thence running in a general easterly direction along the face of the curbing by said curved line of 3 feet radius 8.04 feet to the point of beginning. Containing 886.0 square feet.

The foregoing described land is shown upon a plan entitled "Plan of land taken for Park Purposes at the Washington Elm," dated August 7, 1899, drawn and signed by L. M. Hastings, City Engineer, and on file in the office of the City Engineer, a copy of which plan is to be recorded in the Middlesex South Registry of Deeds, reference to which is hereby made for a more particular description of the land taken.

Respectfully,

GEO. HOWLAND COX,
WILLIAM M. RICHARDSON,
EDMUND REARDON,
Park Commissioners.

In accordance with the above recommendation, the following order

was adopted November 27, 1899, and approved by the Mayor, November 28, 1899:

IN BOARD OF ALDERMEN,
November 27, 1899.

Ordered:— That the land around the Washington Elm, recently enclosed by a curbing, be placed under the control of the Board of Park Commissioners, said land being a part of the public street or way known as Garden Street, and shown upon a plan entitled "Plan of land taken for Park Purposes at the Washington Elm," dated August 7, 1899, drawn and signed by L. M. Hastings, City Engineer, a copy of which plan is to be recorded in the Middlesex South Registry of Deeds, reference to which is made for a more particular description of said land.

On October 24, 1899, the Board submitted the following recommendation:

CAMBRIDGE, October 24, 1899.

To the Honorable, the City Council of the City of Cambridge:—

GENTLEMEN:— The Board of Park Commissioners respectfully recommend to the City Council, that the City take, under the authority granted by Chapter 341 of the Acts of 1892, entitled "An Act to authorize the City of Cambridge to lay out and maintain public parks," and Chapter 337 of the Acts of 1893, amendatory thereto, the parcel of land supposed to belong to the Cambridge Hospital, described as follows:—

Beginning at the tangent point of a curved line of 70 feet radius in the proposed taking line, said point being in the division line between land of Cambridge Hospital and land of the City of Cambridge and 115 14 feet southerly, measured on said division line from a stone bound at the intersection of said division line with the southerly line of Mt. Auburn Street; thence southerly along said division line 141.68 feet to its intersection with the northerly harbor line of Charles River, said harbor line at this point being a curved line of 831.51 feet radius; thence westerly and southwesterly along said harbor line 491.34 feet to its intersection with the division line between land of the Cambridge Hospital and land owned by the Commonwealth for Metropolitan Park purposes; thence northwesterly along said division line 91.65 feet to the intersection with the proposed taking line, said line at this point being a curved line of 2,777.5 feet radius; thence northeasterly along said taking line 282.42 feet to a compounding point with a curved line of 777.5 feet radius; thence northeasterly along said curved line of 777.5 feet radius 269.29 feet to a point of reverse curvature with a curved line of 70 feet radius; thence northeasterly and northerly along said curved line of 70 feet radius 67.60 feet to a tangent point in the division line between land of the Cambridge Hospital and land of the City of Cambridge at the point of beginning. Containing 43,847 square feet; divided between flats, 16,360 square feet, and upland, 27,487 square feet.

For more particular description reference may be had to plan No. 5,208, on file in the office of the City Engineer, a copy of the portion showing land taken as above described is to be placed on file at the Middlesex South District Registry of Deeds.

Respectfully,

GEO. HOWLAND COX,
President of the Board.

The following order for taking the land recommended in above report, was adopted by both branches of the City Council, November 27, 1899, and approved by the Mayor, December 2, 1899:

IN BOARD OF ALDERMEN,
November 27, 1899.

Whereas, by Chapter 341 of the Acts of the Legislature of the Commonwealth of Massachusetts for the year 1892, entitled "An Act to authorize the City of Cambridge to lay out and maintain public parks," and accepted by the City Council of the City of Cambridge, by a resolve approved June 15, 1892, and by Chapter 337 of the Acts of the Legislature for the year 1893, amendatory of said Chapter 341, it is provided that said City "by its City Council at any time after the passage of this Act may take and hold by purchase or otherwise, any and all real estate and lands within said city as it may deem advisable, upon the recommendation of the Board of Park Commissioners hereinafter mentioned, and may lay out and maintain and improve the same as a public park or parks" — and

Whereas, it is deemed advisable upon the recommendation of said Board of Park Commissioners that the city should, under the provisions of the aforesaid acts, take and hold for the purpose of improving the same as a public park or parks, the lot or parcel of land hereinafter bounded and described, and

Whereas, "An appropriation sufficient to cover the estimated expense thereof" has been made by the City Council, as required by Section 3 of the aforesaid Chapter 337, of the Acts of the Legislature of 1893, —

Now, therefore, be it known, that by virtue and in pursuance of the authority conferred by said Acts of the Legislature, and by every other power and authority it hereto enabling, the City of Cambridge, by its City Council, does hereby take for the purpose aforesaid the following described lot or parcel of land situated within the limits of said City, to wit: —

A parcel of land supposed to belong to the Cambridge Hospital, bounded as follows: —

Beginning at the tangent point of a curved line of seventy (70) feet radius in the proposed taking line, said point being in the division line between land of Cambridge Hospital and land of the City of Cambridge and one hundred and fifteen and fourteen hundredths (115.14) feet southerly, measured on said division line from a stone bound at the intersection of said division line with the southerly line of Mount Auburn Street; thence southerly along said division line one hundred and forty and sixty-eight hundredths (140.68) feet to its intersection with the northerly harbor line of Charles River, said harbor line at this point being a curved line of eight hundred and thirty-one and fifty-one hundredths (831.51) feet radius; thence westerly and southwesterly along said harbor line four hundred and ninety-one and thirty-four hundredths (491.34) feet to its intersection with the division line between land of the Cambridge Hospital and land owned by the Commonwealth for Metropolitan Park purposes; thence northwesterly along said division line ninety-one and sixty-five hundredths (91.65) feet to the intersection with the proposed taking line, said line at this point being a curved line of twenty-seven hundred and seventy-seven and five tenths (2,777.5) feet radius; thence northeasterly along said taking line two hundred and eighty-two and forty-two hundredths (282.42) feet to a compounding point with a curved line of seven hundred and seventy-seven and five tenths (777.5) feet radius; thence northeasterly along said curved line of seven hundred and seventy-seven and five tenths (777.5) feet radius two hundred and sixty-nine and twenty-nine hundredths (269.29) feet to a point of reverse curvature with a curved line of seventy (70) feet radius; thence northeasterly and northerly along said curved line of seventy (70) feet radius sixty-seven and six tenths (67.6) feet to a tangent point in the division line between land of the Cambridge Hospital and land

of the City of Cambridge at the point of beginning. Containing forty-three thousand eight hundred and forty-seven (43,847) square feet, divided between flats, sixteen thousand three hundred and sixty (16,360) square feet, and upland, twenty-seven thousand four hundred and eighty-seven (27,487) square feet.

The foregoing described land is shown upon plan No. 5,208, drawn by Lewis M. Hastings, City Engineer, dated June 27, 1899, and on file in his office, a copy of which plan is to be recorded in the Middlesex South District Registry of Deeds, reference to which is hereby made for a more particular description of the lot taken.

So, therefore, be it known, that the parcel of land, together with all the buildings and structures thereon, hereinbefore mentioned and particularly described, on this twenty-seventh day of November, A.D., 1899, is hereby taken by the City of Cambridge, as aforesaid, for the purpose hereinbefore set forth, assessments for the cost and expenses thereof to be laid under the provisions of Sections 6 and 7 of said Chapter 341 of the Acts of 1892; and it is hereby

Ordered, That in accordance with the requirements of Section 2 of said Chapter 341 of the Acts of the year 1892, hereinbefore mentioned, the City Clerk be and hereby is directed to cause to be recorded, in the Registry of Deeds of the Southern District of the County of Middlesex, a description of the aforesaid taking sufficiently accurate for identification, with a statement of the purpose for which the same was taken, which statement shall be signed by the Mayor.

Also that the City Clerk be requested to send notice of this taking to the owners of record of the land hereby taken.

WORK OF THE YEAR.

There has been but little park construction work during the past year, yet by reason of the pleasing fiction that whatever is given to the Park Department to do is park work, and therefore chargeable to park construction, and payable out of an issue of bonds designated "Park Loan," the account of the City Treasurer's books headed "Park Construction" shows an expenditure of $105,438.81.

As matter of fact, the department has been largely engaged during the year in constructing a bathing beach and bath house, and in laying out roadways to improve the value of and render marketable real estate in various sections.

The construction of the driveway and the preparatory work for planting trees, from West Boston Bridge westward on the Esplanade, is a property development undertaking. The work of extension of the Esplanade up the river is for the purpose of obtaining a connection through to existing streets in Ward 4, so as to bring the abutting property into notice and render it accessible and marketable.

The construction of the park roadway between Brookline and Magazine Streets is for a similar reason. The construction of the bathing beach and bath house was imposed on us by a sudden popular demand.

These four pieces of work have cost $85,846.78 out of a total charge to construction of $105,438.81. Of the balance $11,483.71 has been used

in the construction of the triangle at the corner of Mount Auburn and Bath Streets, and in necessary work caused by settling, and $8,108.32 in general accounts, etc.

In December of this year, by an arrangement with the trustees of the Cambridge Hospital, the city acquired a strip along the river front of their property, about 491 feet in length and 80 feet in width.

During the coming year it is proposed to construct a beach along this strip to connect our present work with the taking at Gerry's Landing of the Metropolitan Park Commission. In addition to the beach there will be a tree planting space and a twenty foot walk.

The trustees of the Hospital very generously gave this strip of land to the city, the only condition being that the city should erect along the line a light iron fence of the kind standing between the Hospital and Park property at the present terminus of constructed work.

It has seemed to the Board very desirable that this bit of river front should be acquired and developed. As said above, it connects our present work with the proposed Metropolitan work; it is the last link and a short one in the river chain, so far as Cambridge share of up-river work is concerned, and from the point of view of the observer, owing to the contour of the bank, is the natural termination of the park work.

In this connection it seems proper to call attention to the desirability of the construction, by the State, of the bridge and boulevard connection between the Speedway and Fresh Pond. The State has acquired, with the consent of the city, all the land necessary for this purpose, all lying within our limits. So far as the takings are of private property, they diminish the amount of property taxable by the city. The construction of the boulevard will, nevertheless, increase the amount of taxable property by making abutting property more accessible and marketable, and will be of material benefit to the city by enabling it more easily to meet its share of the cost of the Metropolitan Park construction which, by law, is to be assessed upon all cities and towns within the Metropolitan district. The longer the boulevard remains unconstructed, the longer the city is deprived of the benefit of its past or future value for taxation.

The construction of the bridge over the river between the Speedway and Gerry's Landing is urged. With the park development on the Longfellow Marsh, the reconstruction of North Harvard Street, the work of this Commission between Boylston Street and the Hospital, it seems that the bridge connection is desirable not only that the circle should be completed, but to enable those coming from Watertown and beyond, and Arlington and beyond, to more easily reach the Speedway, Brighton, and Brookline, than is now the case.

The extension of the boulevard from Fresh Pond to the Mystic

Valley Park System is also urged as one of great value to the city and of great convenience to our citizens and those of other towns and cities.

SECTION D.

ROADWAY BROOKLINE STREET TO MAGAZINE STREET.

In pushing the work on this section of the river road, it has been the purpose of the Commissioners to provide an attractive driving entrance to Cambridge from Brookline Bridge that will be free from car tracks and from heavy teaming. It is the beginning of the river road which will connect Brookline Bridge with Boylston Street and Harvard Square. It is the intention of the Commissioners to complete the section between Brookline Street and Magazine Street, and to plant the trees (red oak) early in the spring.

If the appropriation permits, it will be a wise policy to continue the road across the marsh to River Street.

CAPTAIN'S ISLAND.

The Commissioners did not contemplate doing any work at Captain's Island for some years, but the demand for a bathing beach forced a change in the plans made for the season's work. A large force of men has been engaged in grading and laying out this most attractive spot, which will be ready early in the spring for lawn, shrub and tree planting. For beauty of location on the river and for popular use it is the gem of the entire park system.

BATHING BEACHES.

The Commissioners contemplated building at Captain's Island a small, temporary beach with limited accommodations, but the immediate demand was so pressing that they felt compelled to enlarge upon their plans and to make some more permanent provisions. This was done by the construction of a beach of river gravel, with a slope of 1 in 13 for a length of 430 feet. The old Magazine was used for a bath house and served the purpose admirably, but the extent to which the beach was used showed conclusively the necessity of much larger accommodations in the future, and plans have been prepared for two additional bath houses, — one for men and one for women. After beginning the grading one step necessitated another, and as there seemed to be no point at which the work could be profitably stopped, the Board carried it through to completion, at an expense of about $14,000.00, thus anticipating work which it was expected would not be required until later. There is no question but that Captain's Island bathing beach is unequalled by any artificial beach in this vicinity. The water of the river is clean, and its temperature much higher than the water at Revere Beach.

During the past season about 20,500 people used the bathing beach,

of which about 1,500 were women and girls who were poorly accommodated by the two iron voting booths located near the beach. To build proper bath houses an expenditure of about $15,000 is required.

The maintenance of this bathing beach will require an officer, two life guards, three bath house men and one woman. It is possible that the wages of one of the men can be met from renting bathing suits. This question is receiving the consideration of the Board, and undoubtedly will be satisfactorily solved at the proper time.

To provide proper bathing facilities, where the people will be served without prejudice to other interests, is a problem that requires careful consideration. How much money can be devoted to this specific object without prejudice to other work also requires careful consideration. It can be assumed that Captain's Island is admirably adapted for the purpose, and that the bathing beach built during the past summer met with popular approval. It is possible to build a similar beach at the East Cambridge front by taking away a portion of the sea wall. It is quite reasonable to suppose that this, too, will prove to be a suitable and fitting place for a bath house. To locate one elsewhere on the Cambridge side of the river does not appear feasible, as the lack of width of the shore taking would seem to prevent.

On the Boston side, however, the Metropolitan Commissioners have ample facilities for building a beach with bath house accommodations between Boylston Street and Western Avenue Bridges, and likewise on the shore above Gerry's Landing.

The construction of a beach and bath house at East Cambridge front will cost in the vicinity of $25,000. While there is no question about the necessity of a bathing beach at this point, it is questionable if so large a sum should be taken in one season from the funds for river construction work, in addition to the amount it is necessary to spend to complete the bath houses at Captain's Island.

If the City Council, in its judgment, considers it wise or necessary to do this work at once, it seems only proper that a separate loan be made for the purpose, otherwise the Park Board will find it impossible to carry on other river work which is necessary to get the quickest returns on the large sums already expended.

Placing a bathing beach near a purely residential district may be a hazardous experiment. While Captain's Island is to become a centre of summer out-door life, and people will flock there by hundreds and get much enjoyment from it, the residents along Magazine Street look at the proceeding with many misgivings. Justly so — for during the past season, because of inefficient police protection to the street, they have been subjected to serious annoyance from boys and young men with hoodlum

tendencies who have daily passed through the street to and from the beach. These annoyances at one time assumed such alarming proportions that a petition was circulated and signed by many of the residents of Magazine Street, praying that the Commissioners close the bath house and alleging that property on the street was being depreciated in value in consequence.

The Board therefore suggests to the City Council the expediency of demanding a police service for Magazine Street which shall protect the residents of that thoroughfare during the months when the bath houses are open. The Commissioners have no difficulty in maintaining order at the beach, although the irrepressible hoodlum boy is in evidence, there he is in a minority and under the watchful eye of the park officer; but when off park limits his pent up emotions, good and bad, are given full play and the unoffending resident along the thoroughfare is made to suffer thereby.

The experience of the Commissioners at the temporary beach at Captain's Island, the past season, compels them to frankly admit that they had not anticipated such phenomenal use as was made of it. They now believe that proper and suitable bath houses should be built there at once and that a similar work be begun at East Cambridge front, but in order that this may be done at once without prejudice to park construction they reiterate their opinion that it should be done by a bath house loan and so recommend.

PARKS, SQUARES AND COMMONS.

CAMBRIDGE FIELD.

The field is rapidly becoming a thing of great beauty. As the trees and shrubs increase in size its appearance reveals the skill and foresight of the landscape architects. In the matter of use but little is left to be desired, and the field serves its purpose admirably.

The only unsatisfactory feature is the condition of the playground. This, it will be remembered, is filled land. The winter's frost throws up all the small stones in the filling and scatters them over the field, making a very objectionable surface for games of any sort. No amount of care seems to remedy the difficulty. The Commission is advised and believes that the only alternative will be to spread a loam surface and seed down to grass. Such a course would be very expensive, besides depriving people of the use of the field for a whole season.

RINDGE FIELD.

No work except the necessary cutting of grass has been done, during the past year. The field is used to a limited extent by children and young men, but not sufficiently to justify the Commissioners in any expense for immediate development.

HASTINGS SQUARE.

Considerable work in the past, although not during the present year, has been done on Hastings Square in deference to many repeated requests, but the result is far from satisfactory. The Board believes that some radical changes must be made before anything satisfactory will be obtained. The double rail fence around the square should be removed, a large number of trees should be cut down, and a different scheme of planting devised. Under the best of conditions it is difficult to deal with a formal rectangular piece of land of the area of Hastings Square, but it is believed that much better results than now exist can be obtained. The work which has been done heretofore has been mainly in the removal and cutting out of trees. Before this work was completed the Commissioners yielded to many protests and ceased operations. It is believed, however, that no satisfactory treatment of the square can be had without considerable more cutting out of trees.

Dana Square, Winthrop Square, Washington Square, Broadway Common and the Public Common need no special mention at this time.

SHADE TREES.

An unusual amount of work has been done during the year in the matter of removal, trimming and planting of the shade trees. Ever since the care of the trees was transferred to the Park Department it has been endeavoring to systematize the work, but the insufficient appropriation for maintenance of the department has not enabled it to make much progress in that direction. As was stated in the previous report, satisfactory work can only be accomplished by the employment of a tree inspector, whose sole duty should be a periodical patrol and inspection of the whole city in order to detect decay of the trees and remedy the same when possible; to report the location of dead or dying trees; to cause the necessary trimming of dead branches and of live branches which interfere with buildings or other structures or other trees; to place and repair guards; to see that trees do not receive too much or too little nourishment; to investigate and report upon applications for removal and planting. Under the present conditions, the department has to rely upon the individual attention of the Commissioners and Superintendent and upon such casual reports as are brought to it by the police or complaints from citizens. The result is far from satisfactory, in that not only many or most cases where action is necessary are brought to its attention too late for proper treatment, or the city is subjected to the possibility of large damages for injuries which might have been prevented if known, and the impression becomes general that this branch of the work of the department is being neglected.

In making up the estimates last year for maintenance appropriation, the sum of $500 was included for the employment of a tree inspector, but owing to the large cut down of the estimates, the department was unable to devote any money for such purpose. The necessity of such an appropriation is again urged. One year's interest upon a single claim for damages caused by a falling branch or tree would pay the whole cost of a tree inspector.

The city has lost and is losing, at a constantly increasing rate of rapidity, many of its finest trees, particularly elm trees, for these seem to be far more susceptible than others to whatever may be the sources of danger. The department has taken the best advice obtainable as to the causes and reasons, and finds that no one cause is responsible in every case. In many instances the trouble is directly traceable to escaping illuminating gas, in others to escaping sewer gas, in others to what is believed to be escaping electric currents. In these cases the appearance of the roots of the trees and the odor of the wood or of the soil about the roots determines the cause. There is also the usual low percentage of decay or death from borers or other insects, but nothing more than is ordinarily anticipated.

There nevertheless remains the large majority of cases where none of the above causes can be attributed, and where the trouble can not be definitely located or named. It is believed that in such instances the cause is to be found in insufficient or in too much nourishment, and that these causes are a natural result of our method of street and sidewalk construction. This belief is shared by Prof. Charles Sargent of the Arboretum and our landscape architects. The lack of nourishment is caused by the fact that all the soil upon which the tree roots depend for sustenance is covered by a surfacing which prevents the making of new soil and prevents moisture from soaking through, but carries it off through the street gutters to the catch basins and sewers. The hard macadam of our streets, the paving of our gutters, the brick, asphalt, stone or concrete of our sidewalks, the proximity of our buildings to the sidewalk line, tend to carry off surface water and prevent its absorption into the soil. It is to be remembered that the nourishing roots of a tree are not the anchor roots commonly observed at its base, but are the small slender shoots from the anchor roots which may be ten to fifty feet or more from the base of the tree.

The superabundance of nourishment which may be fatal to a tree may be illustrated by having in mind the difference in the effect of a breeze or a draught upon an individual. A healthy man who is exposed to a breeze will not ordinarily take cold, because the breeze being applied to all parts of his body simultaneously reduces his temperature evenly

throughout. If the same individual is so placed that the same breeze is applied to one portion of his body only, there is produced that unevenness of temperature in different parts of the body which brings about a cold.

So when the tree roots receive a substantially equal amount of moisture, as is generally the case when nature is left to itself, the tree thrives. If, however, some roots receive all and others none or substantially none of the moisture, those receiving it only being able to absorb a certain amount of it, the tree itself as a whole, therefore, receives too little, yet certain roots receive too much, and, like a tree which is planted in a pool of water, begins to decay and eventually dies from a superabundance of moisture. This condition is met in many trees standing in our streets where a soil space has been left at the base and into which goes all the surface water which the brick sidewalk, paved gutter and macadam surface are not able to carry off.

It was with this belief in mind that Professor Sargent advised the changes which the department has made in the surrounding soil at the base of the Washington Elm, and it is expected that the result will justify the belief and expense.

Of course it is not expected that much can be accomplished or is practical in the way of remedy. It is found that trees will live for a great many years under the conditions referred to, but that the life of the tree is materially shortened after it has obtained a certain mature growth. Illustrating again by the case of an individual, it may be likened to a disease which will not tend to attack a man before the age of fifty but is likely to prevent his living beyond the age of sixty.

It is therefore to be anticipated that for the above reasons we shall lose many of our older trees, but such anticipation is no argument against planting new ones in their places, because the latter will have many years of usefulness.

So far as it is practicable to remedy any of the causes of trouble referred to, the department will do all in its power.

EXTENSION OF ESPLANADE.

Aside from the small amount of work proposed in the construction of the beach on the hospital river bank, and such bathing beach and bath house requirements as shall be demanded, the Commissioners propose no other work during the coming year except in the direction of extension of the esplanade from the end of the sea wall west of Harvard Bridge. In their last report the Commissioners stated such to be their intention, but the demand for the bathing beach was such that all their time and energies were turned in that direction, with the result that no extension of the esplanade was made.

It is especially necessary since building operations have actually begun on the Esplanade, that a connection through to existing streets, like Putnam Avenue or Henry Street, should be made. In the judgment of the Commissioners, the quicker such connection is made the quicker will buildings and people be attracted to the Esplanade.

It is intended to carry the stone wall only about 280 feet further up the river, and to begin beach work at this point, thus adding a variety to the appearance of the shore and materially diminishing expense. Neither will the double roadway be carried further, as it is believed that a single road will answer all purposes.

QUASI STREET WIDENINGS.

Two cases of quasi street widenings during the past year, — one accomplished and one proposed — have been brought to the attention of this department, because such widenings necessitated a wholesale cutting of some of our finest shade trees.

In the month of April of the present year the City Council, upon petition of the Boston Elevated Railroad, and without formal notice to this department, granted the railroad company the right to construct double tracks through Prospect Street. Upon examination of the premises, acting upon the suggestion of the Mayor, that the projection of the trunks of many of the shade trees into the street would thereby, owing to the narrowness of the street, be a source of danger to vehicles, it was found that thirty-nine trees, mostly elms, and many of them very handsome specimens, projected their trunks into the street sufficiently to be dangerous to users of the street. After a hearing by this Board to all interested, at which the nearly unanimous sentiment was against the removal of the trees; after appeal to the Railroad Commissioners from the action of the City Council granting the locations to the railroad company, and affirmance of the order by the Railroad Commissioners, coupled with an expression of hope that some way would be found to preserve the trees; after suggestion by this Board to the Mayor that a slight change of the curbing would result in obviating the necessity of the removal of most of the fine trees without unduly narrowing the street; after disapproval by the Mayor of such suggestion, this Board felt compelled to order the removal of all the trees referred to. The result is a commonplace appearing street in place of a remarkably handsome thoroughfare.

The proposed case of quasi widening is that of Concord Avenue from Arsenal Square to Sparks Street. It is proposed to grant locations to the Elevated Railroad for double tracks on Concord Avenue. There is no curbing, except in scattered places, on either side of the street between the two points named. But the location of a curbing to give the usual

width of sidewalk will bring thirty trees on the westerly side of the avenue mostly or entirely into the street. Most of these trees are large and very handsome elms. There is no doubt that if double tracks are laid, the trees will be a source of danger and will have to be removed. The result will be the same as on Prospect Street; an attractive residential avenue will become an uninteresting appearing street. The value of property will naturally depreciate, with a consequent change in the class of occupants. In time new trees will grow but the character of the neighborhood is not likely to improve, nor the present value of the property to be equalled.

It will be seen that in both cases this Board is practically powerless. The only question presented to it has been to determine whether or not the trees are dangerous to travel. It seems to the Board that such question can be decided by the city government or the street department, and should be one of the questions to be taken into consideration in determining the main question of granting locations for double tracks or of street widenings.

So long as this Board has no authority or voice in determining such questions, all responsibility for the causes necessitating the removal of the trees must be confined to the City Council.

FUTURE CONSTRUCTION.

The Commissioners feel that the development of the river front should in the immediate future be extended easterly from Boylston Street. This plan necessitates the removal of the coal wharf and sheds now occupied by the firm of Richardson & Bacon. The property occupied by them was leased from Harvard University. The city acquired the title to the property by the taking of January 25, 1894, and since that time has permitted Richardson & Bacon to occupy it as tenants at will, under a nominal rent, until such time as the Commissioners should desire to enter upon and develop the property.

The Commissioners, feeling that it was proper and only fair to give Messrs. Richardson & Bacon a sufficiently long notice of their intention to enter upon the property and terminate their tenancy, have within the past few weeks given notice of their intention to terminate the tenancy on January 1, 1901. This action gives to Richardson & Bacon over a year within which to make necessary arrangements for a transfer of their business to a new situation.

With a similar expectation of an extension of the development of the river front on the Boston side of the river, the Metropolitan Park Commission has notified Mr. J. A. Heaton, who occupies a coal wharf opposite

Richardson & Bacon, as tenant of the Metropolitan Commission under a lease which expires in January, 1901, that it is not its intention to make any renewal of his lease.

By the elimination of these two coal wharves from the river front, the appearance of the river from Boylston Street will be very much improved, especially as the construction of the new Harvard Boat House on Soldier's Field will result in the immediate removal of the unsightly boat house buildings at the foot of DeWolf Street.

There remains to be referred to in this connection the matter of the necessity for a new bridge over the river at Boylston Street. No one can deny that a new bridge is very necessary. The experience of every one attending any of the large games on Soldier's Field is of positive fear of an accident, by reason of the age, the instability, the narrowness of the bridge, and the fact that it forms the small end of the funnel into which is crowded all that those behind can push. Good police work has so far prevented an accident, but a crowd of 30,000 people, when once started, can make short work of a few policemen. Then a catastrophe is likely. The cities of Cambridge and Boston and the Metropolitan Park Commission should at once take up the matter seriously and proceed to the construction of a suitable bridge without delay. Such a bridge, however, should be planned with proper regard for its uses and for its surroundings. It should of course be of the full width of the street, without a draw if possible and of a construction to properly harmonize with the park work on both sides of the river. The river is not wide at this point and the cost cannot be very large.

THE COST OF PARK WORK.

In the six years of park construction (1893–1899) there has been spent for land and development the sum of $1,078,109.63, the entire sum being obtained from the proceeds of 4 and 3½ per cent. thirty and forty-year bonds.

Of this amount $105,000 was spent during the past year. The average for the six years is about $180,000.

The interest and sinking fund charges for 1899 upon the whole outlay amount to about $55,530. The cost for maintenance during this year has been $14,497.01.

Therefore the total cost to the city for this year is $70,027.01, an increase of about $8,000 over last year. Of this increase $1,500 came from increased maintenance appropriation and $6,500 from interest and sinking fund charges on the additional issue of bonds of $100,000.

Based upon the 1895 census (81,643) the cost per capita for the year 1899, of the whole park construction and maintenance, is 86 cents.

Based upon the 1899 tax rate of $17.10 per thousand, 76 cents thereof represents the cost of the park work.

In other words, every man who has paid taxes upon $1,000 has paid 76 cents towards the cost of park work.

The increase in the tax rate of 1899 ($17.10) over that of 1898 ($16.40) is not in any way due to park work, as the increase per capita for park expenses is only ten cents and adds but seven cents to its proportion of the tax rate of 1898 (69 cents). But the return in 1899 in the form of increased valuation of property benefited by park construction has largely offset the increased cost, so that our citizens have really had a large proportion of the entire work of the present year without expense.

A very satisfactory beginning is about to be made in the form of building construction near the Esplanade. An apartment hotel to cost $750,000, it is expected, will be erected, as soon as weather permits, on the upper corner of Massachusetts Avenue and the Esplanade, fronting the latter. As a matter of interest to our citizens, because the first of the many similar buildings expected to be erected in that immediate vicinity in the near future, the Commissioners have inserted in this report a perspective elevation of this building.

This hotel will have one hundred and thirty rooms, arranged in suites adapted for one to six persons and will accommodate from two hundred and fifty to four hundred persons, the rentals being placed at a figure calculated to assure its occupancy by that class of people necessary to insure a suitable and desirable neighborhood. As the building is the pioneer of that section, it is not to be anticipated that the returns from taxation thereof will be based upon its full value, yet it will at once be seen that upon any reasonable valuation the return in taxes will be considerable.

It has cost the city to the present time the sum of $210,329.21 to bring the Esplanade to its present condition, including cost of sea wall and filling, and but for that expense no development of that portion of the river front would have been possible. The charges for interest, sinking fund requirements and maintenance of the Esplanade during the year 1899 were about $10,800.00.

The new hotel alone will return in taxes enough to take care of at least three-fourths of the above charges.

FINANCIAL STATEMENT.

PARK LOAN.

Amount appropriated December 7, 1898	$27,583 18
Amount appropriated March 23, 1899	100,000 00
	$127,583 18

PARK MAINTENANCE.

Amount appropriated March 16, 1899	$13,500 00
Amount appropriated November 2, 1899	998 60
	$14,498 60

During the year bills payable from Park Loans have been approved by the Board and certified to the Auditor to the total amount of $105,438.81, as follows: —

PARK LANDS AND CONSTRUCTION.

River Parkway, Section A.		
Construction account	$29,705 81	
Land account	325 00	
		*$30,030 81
River Parkway, Section B.		
Construction account	$23,753 08	23,753 08
River Parkway, Section C.		
Construction account	180 26	
Land account	3,237 03	
		3,417 29
River Parkway, Section D.		
Construction account	$28,645 60	28,645 60
River Parkway, Section F.		
Construction account	308 21	308 21
River Parkway, Section G.		
Construction account	6,549 97	
Land account	4,933 74	
		11,483 71
Nursery.		
Construction account	913 30	913 30
Washington Elm.		
Construction account	439 98	439 98
East Cambridge Embankment.		
Construction account	425 37	425 37
Rindge Field.		
Construction account	135 64	135 64
Cambridge Field.		
Construction account	128 25	128 25
General Account.		
Construction account	4,346 44	4,346 44
Office Expenses.		
Construction account	1,411 13	1,411 13
Total amount expended		$105,438 81
By moneys received Cr. to Section A		5,437 33
		$100,001 48
Balance unexpended		27,581 70

*$5,437.33 should be deducted from this amount for moneys received and credited to Section A.

During the year bills payable from Park Maintenance have been approved by the Board and certified to the Auditor to the total amount of $14,497.01, as follows: —

Shade trees	$4,619 58	
Cambridge Field	3,090 36	
Commons and squares	2,776 39	
The Shelter	2,615 65	
Public grounds	956 58	
General account	438 45	
Total amount expended		14,497 01
Balance of appropriation unexpended		$1 59

From the above it will be seen that the amount expended during the year under Park Loans was divided as follows: —

Construction account	$96,943 04
Land account	8,495 77
Total	$105,438 81

A detailed classification of the expenditures will be found in the report of the General Superintendent.

Since the beginning of the work in 1893, there has been expended to date, of money raised under Park and Esplanade Loans, the sum of $1,078,109.63.

The division is as follows: —

River Parkway, Section A.		
Construction account	$151,696 10	
Land account	1,901 83	$153,597 93
River Parkway, Section B.		
Construction account	$56,731 28	56,731 28
River Parkway, Section C.		
Construction account	231 13	
Land account	4,650 58	4,881 71
River Parkway, Section D.		
Construction account	$45,878 90	
Land account	95,047 25	140,926 15
River Parkway, Section E.		
Construction account	$18 75	
Land account	25 00	43 75
River Parkway, Section F.		
Construction account	$21,591 80	
Land account	66,432 36	88,024 16
River Parkway, Section G.		
Construction account	$119,377 00	
Land account	85,614 82	204,991 82
Cambridge Field.		
Construction account	$124,417 65	
Land account	78,884 85	203,302 50

East Cambridge Embankment.		
Construction account	$86,672 67	
Land account	45,231 40	
		$131,904.07
Rindge Field.		
Construction account	$8,745 44	
Land account	31,461 85	
		40,207 29
Broadway Park.		
Construction account	$11,308 65	11,308 65
Nursery.		
Construction account	3,462 67	3,462 67
Winthrop Square.		
Construction account	1,866 26	1,866 26
Hastings Square.		
Construction account	943 61	943 61
Washington Elm.		
Construction account	439 98	439 98
General Account.		
Construction account	30,464 80	30,464 80
Office Expenses.		
Construction account	9,507 39	9,507 39
		$1,082,604 02
Less park revenue for 1894 and 1896 merged into land and construction accounts		4,494 39
		$1,078,109 63

Of the whole amount of Park Loans expended to December 1, 1899, 38 per cent. has been for land and 62 per cent. for construction, as follows: —

Land account (less "revenues")	$404,755 55
Construction account	673,354 08
	$1,078,109 63

Respectfully submitted,

GEO. HOWLAND COX,
WILLIAM M. RICHARDSON,
EDMUND REARDON,
} *Park Commissioners.*

REPORT OF THE GENERAL SUPERINTENDENT OF PARKS

CAMBRIDGE, December 1, 1899.

To the Board of Park Commissioners of the City of Cambridge:—

GENTLEMEN: — I have the honor to present my third annual report as General Superintendent of Parks, covering the financial year 1899.

RIVER PARKWAY.

SECTION A.

The filling of the flats at Section A, which was commenced under contract dated May 10, 1897, was completed March 30, 1899. The total cost of reclaiming these flats between West Boston Bridge and the bulkhead which formed the eastern boundary of the Charles River Embankment Company's property, was $142,394.89, or 30 cents per square foot. This amount was divided as follows:—

Sea wall	$77,629 63
Filling flats	51,536 25
Ballast	12,961 14
Engineering etc., 1897 to May 1899, inclusive	4,050 70
	$146,177 72
Received for land taken by Bridge Commission	3,782 83
	$142,394 89

The work done by the department at this section this year consisted in continuing the four rows of tree spaces from Section B to within 500 feet of Main Street, and building the inner sidewalk and roadway connecting those at Section B with Main Street. The tree spaces were not completed until the fall so no trees were planted.

The material which was dredged from the river to fill this section is a very sandy gravel and has very little or no binding quality. An attempt was made to roll the roadway with horse section rollers and later with a ten ton steam roller, but it was impossible to produce a hard durable surface. It may be necessary to surface this road with a binding

material which should be worked well into the surface before being rolled, or else a binding quality might be obtained by sufficient rolling so as to break up some of the gravel into powder.

As soon as possible the watering system should be extended from Section B to Main Street, so that the trees as soon as they are planted may receive sufficient water. This section is so exposed that the natural moisture is not sufficient for newly planted trees.

It is estimated that it will cost about $13,270 to complete Section A, not including planting or lighting. This estimate is made up as follows :—

Loam	$9,170 00
Drainage system	1,130 00
Binding surface for both roads	1,090 00
Preparing loam spaces	900 00
Shaping and rolling roads	535 00
Watering system	445 00
	$13,270 00

SECTION B.

The construction work at this section this year consisted chiefly in extending the work completed in 1898 easterly 630 feet and westerly 550 feet, completing the loam spaces, drainage system, roadways and tree planting. Four men have been constantly employed caring for the grass, trees, etc., of last year's completed work.

The same plan of construction as described in last year's report was carried on, using about 15 cubic yards of loam for each tree and a foot and a half of loam on grass and planting spaces. Shrubbery has been planted in the four central loam spaces. This year, loam to the amount of 11,173 cubic yards was used at this section, costing $10,039.34 or 90 cents per cubic yard. The watering system has been carried 1010 feet westerly.

It will cost about $690 to complete Section B easterly to Section A, not including planting and lighting, as follows :—

Binding surface for both roads	$330 00
Watering system	200 00
Shaping and rolling roads	160 00
	$690 00

SECTION C.

No construction work has been done at this section.

It has been estimated that it will take about 300,000 cubic yards of filling to complete this section in accordance with the proposed beach plan.

There is about 280 feet of wall to be built from end of present wall to the proposed bastion, and about 120 feet of wall or bulkhead from bastion in towards the beach.

SECTION D.

The most important work at Section D this year has been the construction of the park road between Brookline and Magazine Streets. In August a contract was made with William B. Mullen to furnish between 17,000 and 20,000 cubic yards of clean filling for this work, at a price of 58 cents per cubic yard. This contract was completed November 21, 19,821 cubic yards having been delivered. It will require considerable more filling on this work before the gravel surfacing is put on, on account of the enormous settlement which has been going on since the work commenced. The original estimate for this work, not allowing anything for settlement or compression was 13,840 cubic yards. It is probable that before the work is completed it will have taken at least 24,000 cubic yards, or nearly 75 per cent. more than the net estimate. A contract has been made with Mr. Mullen to furnish about 1,500 cubic yards of coarse surfacing gravel at 75 cents per cubic yard, and about 650 cubic yards of fine gravel at 85 cents per cubic yard. Undoubtedly enough sub-filling can be obtained this winter for 25 or 30 cents per cubic yard to finish the sub-grade so that the gravel may be spread early next spring.

The dyke which encloses the large area of marsh east of Magazine Street was finished last May, and since then the tides have been excluded from this field. This has added greatly to the appearance of the marsh as the old rank marsh grass has gradually given way to green meadow grass. Some settlement, due undoubtedly to the compression of the porous marsh mud, has taken place, but nothing of a serious character has been noticed. The expanse of this field is so great that its low elevation (about five feet less than the top of the dyke and park road) is not noticeable with the gradually sloping sides of the road and paths. It is hoped that this field may be flooded in winter for skating purposes, but it is very improbable that the marsh will hold water without a foundation having first been frozen.

If the park road between Magazine and River Streets is to be built to the same grade as the road just spoken of, it would be well to spread brush or planking under the fill to prevent some of the settlement.

The most popular work done by the department this year was the remodeling of the old Magazine Building into a locker-house, and the construction of a bathing beach at the foot of Magazine Street. In June operations were begun on the old stone building, which is supposed to have stood here since the Revolution, to turn it into a modern locker-

house. The old walls were leveled, the partition wall removed, the entrances made larger, and great gaps cut into the walls for windows. A shingled hip roof was put on, the walls were pointed and cemented, windows and doors put in, a hard pine floor laid, and one hundred and thirty-six lockers built. These lockers are 12 x 14 x 42 inches, and were erected in two tiers on either side of the room. The locker-house was used exclusively for men and boys, but it was soon found that some provision was needed for the accommodation of women and young girls. Two voting booths were placed at one end of the beach, and during the season it was estimated that about fifteen hundred women and girls made use of them. A matron was employed to preserve order, and help the little ones with their clothes. A janitor was employed in the locker-house, who unlocked and locked the lockers for the bathers, giving them a number corresponding to the number of their locker. This number was worn by the bathers hung around the neck by means of a rubber cord. It was estimated that about nineteen thousand men and boys used the locker-house during the season. The largest number of bathers noted in any one day was seven hundred and sixty, while the average daily attendance was about three hundred.

The construction of the beach was commenced in June. The old stone wharf was removed and the landing cut down to the grade of the beach. From this point the beach was extended down river about 430 feet and up river about 160 feet. In order to get a proper slope to the beach considerable marsh mud had to be cut away. This mud was used in the loam spaces to within six inches of finished grade. A part of the beach was built with bank gravel taken from the knoll on Captain's Island, but most of it was constructed with gravel dredged from the river.

The current at this point in the river is very swift, the water at some tides flowing sixty feet a minute. Life lines were used so as to enclose the entire space occupied by the bathers, while the beach was patroled by two life savers, in swimming apparel, and a park police officer.

The plan of Olmsted Brothers for the construction of Captain's Island has been carried out and completed, with the exception of the planting. The loam is placed and the planting can be done next spring.

SECTION F.

No construction work has been done at this section this year.

SECTION G.

The principal work on this section was the remodeling of the triangle at the corner of Mount Auburn and Bath Streets. By an order of the City Council, approved December 7, 1898, that portion of Bath Street lying between Mount Auburn Street and Charles River Road was discon-

tinued and made a portion of Section G. In order to accommodate the abuttors an eight foot walk was built on the easterly side of Bath Street, running from Mount Auburn Street and connecting with the sidewalk of Charles River Road. The remainder of Bath Street has been turned into a grass lawn.

The other construction work was made necessary by settlement in the beach, road and loam spaces. The river gravel, which was stored on land of the Cambridge Gas Light Company in 1897, was used in raising the grade of the beach. Catch basins in the roadway were cut down to allow of the drainage of surface water. A large portion of the lawn near the Lowell willows was also regraded.

SECTION H.

A taking of 43,847 square feet, divided between flats, 16,360 square feet, and upland, 27,487 square feet, has been made along the shore of the Cambridge Hospital property from Section G to land of the Metropolitan Park Commissioners. This taking is to be designated as "Section H." It is estimated that it will take about 19,400 cubic yards of material to build the beach along this section.

WASHINGTON ELM.

Last May a large number of newspapers throughout the country printed alarming accounts of the supposed hasty decline of the Washington Elm, intimating that in a very few years the old historic tree would be a thing of the past. The usual care had been taken of the tree and no increase of decay was noticed, but to be on the safe side, Prof. Charles S. Sargent, of the Arnold Arboretum, was asked to examine the tree and make a report as to its condition. His report is as follows:—

ARNOLD ARBORETUM, HARVARD UNIVERSITY,
JAMAICA PLAIN, MASS., May 31, 1899.

H. E. Whiting, Esq., Board of Park Commissioners, Cambridge, Mass.

MY DEAR SIR:—In compliance with your request I have made an examination of the Washington Elm in Cambridge. On the whole it does not appear to me to be in a worse condition than it was when I saw it three or four years ago. The number and condition of the leaves indicate considerable vitality, and the surface of old wounds is in a generally healthy condition. It is evidently suffering, however, from insufficient nourishment and from drought. The position of the tree on the crown of a much traveled street prevents rain-water from reaching it directly, while the general water table of the locality has no doubt been lowered by the sewer and water-pipe which pass close to the roots. I believe it is perfectly practicable to furnish the tree with a fresh supply of plant-food and, by some changes in the grade

of the street and its surface, to insure it a more abundant supply of water. If this is done there is reason to hope that the Washington Elm may continue to live for many years.

Yours very truly,

C. S. SARGENT.

In June plans were made by the City Engineer enclosing 886 square feet around the elm in a granite curbing, so planned that water would be accumulated in this space and allowed to reach the roots of the tree. Loam to a depth of one foot was put in this enclosure. This work was commenced the last of July and finished in about two weeks at a total cost of $439.98.

No construction work has been done at Rindge Field, or on any of the commons or squares. Filling to the amount of about 8,100 cubic yards has been received at the East Cambridge Embankment.

PUBLIC GROUNDS.

Plans were made by the landscape architects last spring for the construction of the new Latin School grounds on Trowbridge and Ellery Streets. The work was performed by this department, and paid for by the Public Building Department. The plans call for a large gravel playfield between the Latin School and the English High School, and a fifty-yard cinder track back of the Latin School, so that ample room is provided for light out-of-door exercise. The work has been completed, with the exception of the grass and shrubbery planting.

The grounds of the Peabody School on Linnaean Street have been remodeled by this department, the work being paid for by the Public Building Department. Some planting should be done on these grounds next year.

Small amounts of loam or sod have been supplied to the Agassiz, Holmes, Willard and Wellington Schools, but as no appropriation was made for school house grounds, any money expended on them had to be taken from some other maintenance account, any of which could ill afford to lose even a small amount.

I hope that an appropriation of at least $1,000 will be made next year for school-yard construction. This work is greatly needed and would be highly appreciated if done.

The work of remodeling the Public Library grounds which was commenced in 1897 has remained about as it was left in the fall of that year. An appropriation should be made for the completion of this work as soon as possible. New board walks will be needed for the Library grounds in the near future.

SHADE TREES.

As soon as the ground was in suitable condition for tree planting, work of setting out trees on the streets in the spaces prepared late last year was commenced. The following trees were planted: —

Ulmus Americana (American Elm)	147
Acer saccharinum (rock maple)	51
Fraxinus Americana (white ash)	38
Acer platanoides (Norway maple)	3
	239

During the year 482 trees were trimmed, 720 new wire guards were put on and 2,174 old guards repaired. A new system of putting wire guards on the trees has been inaugurated. Instead of the strip of zinc which has been used to protect the rough edges of the netting, a piece of stout telegraph wire is woven into either end of the netting, turning the rough edges around the piece of telegraph wire. This gives considerable stiffness to the guard and is much more durable than the old method.

Forty-three petitions for the removal of trees have been received by the Board, twenty-five of which have been granted. The trees removed during the year, including those dead or partly so, and those otherwise in an unsafe condition, are as follows: —

Ulmus Americana (American elm)	77
Acer saccharinum (rock maple)	52
Æsculus hippocastanum (horse chestnut)	10
Acer dasycarpum (silver leaf maple)	4
Acer platanoides (Norway maple)	3
Fraxinus Americana (white ash)	2
Larix (larch)	2
Salix alba (white willow)	2
Ulmus campestris (English elm)	2
Acer rubrum (swamp maple)	1
Betula alba (white birch)	1
Populus alba (silver poplar)	1
Populus canadensis (Canadian poplar)	1
	158

Twelve petitions for the moving of buildings through the streets have been reported upon, giving a detailed account of the necessary cutting of the public trees in each case. In several cases the cutting has been

very considerable, which soon led to the passing of a vote by the Board, "that no applications for the cutting of trees for the purpose of allowing buildings to be moved through the streets of the city will hereafter be entertained."

CAMBRIDGE FIELD.

In December, 1898, the play field was flooded for skating. From the last of December to the first of February about four acres of ice were maintained in good condition and skating was enjoyed by thousands of people. A fifty-one inch ice-plane was purchased and used with excellent results.

During the summer and autumn months the field was used to considerable extent in games of base ball, foot ball, hurly, etc. Through the generosity of the Cambridge City Band, whose services were given without compensation, six band concerts were given at the shelter during the months of July and August. These concerts drew large crowds of people to the field and were greatly enjoyed.

Cambridge Field has been kept in excellent condition under the direction of the Field Superintendent. There have been twenty-nine arrests by the park police.

THE YEAR'S EXPENDITURES.

The expenses of the department for the year are shown in the following summary of the departmental accounts: —

PARK LOANS.

Amount appropriated December 7, 1898	$27,583 18
Amount appropriated March 23, 1899	100,000 00
Amount appropriated June 29, 1899, money received Cr. to Section A	1,654 50
Amount appropriated September 21, 1899, money received Cr. to Section A	3,782 83
	$133,020 51

EXPENDED.

River Parkway, Section A.

Filling Flats	$23,466 14	
Pay roll	3,140 53	
Loam	1,641 60	
Engineering	594 93	
Teaming	545 58	
Examination of titles	325 00	
Watering system	142 88	
Filling	91 19	
Stakes for engineers	23 50	
Lumber	19 45	
Carpentering	16 75	
Signs	14 00	
Use of horse roller	9 00	
Printing and advertising	26	
		$30,030 81
Amounts carried forward		$30,030 81 $133,020 51

Amounts brought forward		$30,030 81	$133,020 51
River Parkway, Section B.			
Loam	$10,039 34		
Pay roll	7,405 84		
Teaming	2,282 41		
Drainage system	863 85		
Filling	770 04		
Shrubs	499 33		
Engineering	490 78		
Watering system	403 88		
Trees	327 30		
Steam roller	218 75		
Tools and hardware	127 43		
Grass seed	97 60		
Lumber	75 67		
Tree poles	39 00		
Stakes for engineers	37 00		
Manure	35 13		
Signs	14 00		
Fire hose	9 50		
Lawn boots	7 50		
Printing and advertising	7 23		
Hose for trees	1 50		
		$23,753 08	
River Parkway, Section C.			
Lands	$3,226 83		
Engineering	159 63		
Pay roll	19 00		
Recording documents	10 20		
Blue prints	1 63		
		$3,417 29	
River Parkway, Section D.			
Filling	$11,821 48		
Pay roll	5,699 61		
Dyke	2,298 63		
Loam	2,023 51		
Remodeling Magazine Building	1,763 38		
Gravel for beach	1,447 05		
Engineering	1,392 14		
Teaming	1,252 90		
Ashes	328 50		
Supplies for locker-house	130 47		
Boat, buoys, rafts and life lines	107 57		
Removing old stone wharf	100 00		
Moving voting booths	60 00		
Stakes for engineers	42 34		
Board walk	39 79		
Shower bath and floor	36 00		
Watering system	26 41		
Signs	25 49		
Printing and advertising	19 43		
Lumber	13 15		
Express	5 85		
Carpentering	3 58		
Black prints	3 40		
Amounts carried forward	$28,640 68	$57,201 18	$133,020 51

Amounts brought forward	$28,640 68	$57,201 18	$133,020 51
Tools and hardware	2 32		
Coal	1 35		
Stove pipe	90		
Repairing lock	35		
		$28,645 60	
River Parkway, Section F.			
Engineering	$109 63		
Loam	79 56		
Lighting	64 68		
Setting edgestone	19 53		
Pay roll	18 88		
Water rent	6 00		
Painting fence	5 20		
Gravel	4 73		
		$308 21	
River Parkway, Section G.			
Lands	$4,907 99		
Pay roll	4,023 41		
Lighting	998 43		
Teaming	570 03		
Engineering	393 03		
Loam	199 02		
Gravel	193 73		
Edgestone and setting	57 14		
Braces for willows	37 29		
Shrubs	35 94		
Examination of titles	15 00		
Black prints	14 62		
Lumber	13 87		
Recording documents	10 75		
Printing and advertising	4 75		
Bound posts	3 00		
Express	2 74		
Hose for trees	1 50		
Oil	1 47		
		$11,483 71	
Nursery.			
Pay roll	$761 24		
Trees	125 75		
Shrubs	14 65		
Tools and hardware	5 36		
Coal	4 50		
Labels	1 50		
Express	30		
		$913 30	
Washington Elm.			
Curbing	$252 01		
Pay roll	110 60		
Teaming	31 50		
Loam	27 00		
Engineering	16 88		
Cement	1 99		
		$439 98	
Amounts carried forward		$98,991 98	$133,020 51

Amounts brought forward		$98,991 98	$133,020 51
East Cambridge Embankment.			
Filling	$221 10		
Engineering	103 88		
Pay roll	99 00		
Lumber	1 14		
Hardware	25		
		$425 37	
Rindge Field.			
Gravel	$46 80		
Pay roll	34 67		
Signs	25 00		
Engineering	23 62		
Repairing drinking faucet	3 30		
Teaming	2 25		
		$135 64	
Cambridge Field.			
Ice plane	$128 25		
		$128 25	
General Account.			
General Superintendent's salary	$1,675 00		
Landscape Architect's fees	630 20		
Watering cart	350 00		
Board of horse, carriage hire, etc.	326 75		
Tools and hardware	169 45		
Printing and binding reports of 1898	169 22		
Car tickets for engineers	150 00		
Pay roll	122 33		
Heliotype cuts for reports of 1898	102 50		
Rent of store room	100 00		
Bicycle and bicycle repairs	64 70		
Stakes for Engineers	62 34		
Sign boards for "Rules and Regulations"	55 00		
Carpentering	51 31		
Car tickets for office	50 00		
Lawn sprinklers	39 00		
Blacksmithing	29 68		
Badges, etc., for police	27 90		
Shoeing horse	27 00		
Rubber boots	25 50		
Binding books	22 00		
Rods for Engineers	15 50		
Printing	12 25		
Engineering	12 23		
Repairing wagon	10 50		
Photographic material	10 18		
Sharpening tools	7 80		
Express	7 55		
Killweed	4 50		
Envelopes for reports	4 15		
Repairing Engineer's transit	3 60		
Cigars	3 25		
Amounts carried forward	$4,341 39	$99,681 24	$133,020 51

Amounts brought forward	$4,341 39	$99,681 24	$133,020 51
Repairing harness	2 95		
Recording documents	1 10		
Inking pads	75		
Lumber for raft	25		
		$4,346 44	
Office Expenses.			
Salary of stenographer	$650 00		
Salary of bookkeeper	390 00		
Stationery and printing	137 01		
Telephone service	126 25		
"Pay roll" and "Assessed Values" books	47 00		
Oak plan cabinet	46 50		
Typewriter supplies	7 75		
Repairing desk	5 87		
Express	75		
		$1,411 13	
Total			$105,438 81
Balance unexpended			$27,581 70

PARK MAINTENANCE.

Amount appropriated March 16, 1899	$13,500 00
Amount appropriated November 2, 1899	998 60
	$14,498 60

EXPENDED.

Shade Trees.			
Pay roll	$3,887 79		
Wire netting	317 92		
Teaming	237 26		
Tools and hardware	63 23		
Engineering	44 11		
Tree poles	30 00		
Lumber	10 58		
Sharpening saws	9 20		
Hose for trees	5 25		
Repairing fence	4 30		
Trees	3 00		
Repairing measuring stick	2 60		
Loam	1 80		
Printing and advertising	1 29		
Express	1 00		
Cheese cloth	25		
		$4,619 58	
Cambridge Field.			
Pay roll	$2,757 89		
Fence stakes	74 25		
Tools and hardware	46 56		
Canvas and repairing awning	35 61		
Base ball bases	28 00		
Repairing drinking fountain	27 72		
Sand for courts	26 24		
Uniform	24 50		
Amounts carried forward	$3,020 77	$4,619 58	$14,498 60

Amounts brought forward	$3,020 77	$4,619 58	$14,498 60
Teaming	23 25		
Repairing fire hose	13 25		
Flags	11 60		
Repairing leak in water pipe	10 37		
Engineering	6 00		
Express	2 00		
Hose for trees	1 62		
Sewer grating	1 50		
		$3,090 36	
Commons and Squares.			
Pay roll	$2,339 96		
Lumber	127 30		
Teaming	103 50		
Work on flagstaffs	41 99		
Gravel	39 00		
Flags	34 80		
Tools and hardware	29 42		
Rubbish barrels	21 00		
Engineering	15 86		
Repairing flags	9 50		
Repairing hydrants	9 44		
Signs	2 96		
Bulbs	1 50		
Express	16		
		$2,776 39	
The Shelter.			
Pay roll	$2,095 25		
Telephone service	108 54		
Coal	96 75		
Lighting	50 12		
Plumbing	43 80		
Wire mats	42 00		
Uniforms	37 75		
Clock	35 00		
Miscellaneous repairs and supplies	32 10		
Laundry	24 09		
Floor brushes	19 50		
Toilet paper	18 00		
Towels	9 75		
Hanging awnings	2 15		
Express	85		
		$2,615 65	
Public Grounds.			
Pay roll	$695 73		
Plants	65 00		
Manure	55 36		
Bulbs	53 60		
Engineering	32 74		
Loam	27 00		
Sod	20 40		
Garden hose and line	6 75		
		$956 58	
Amounts carried forward		$14,058 56	$14,498 60

Amounts brought forward		$14,058 56	$14,498 60
General Account.			
Board of horse	$260 00		
Repairing wagon	50 00		
Repairing lawn mowers	48 00		
Repairing harness, etc.	20 25		
Tools and hardware	19 45		
Shoeing horse	16 50		
Repairing bicycle	11 65		
Lawn mower sharpeners	10 00		
Express	2 60		
		$438 45	
Total			$14,497 01
Balance unexpended			$1 59

Respectfully submitted,

H. E. WHITING,
General Superintendent of Parks.

REPORT OF THE LANDSCAPE ARCHITECTS

Brookline, Mass., December 8, 1899.

George Howland Cox, Esq., Chairman of the Board of Park Commissioners, Cambridge, Mass.:—

Dear Sir:—We beg to submit herewith a report upon certain matters connected with the Cambridge Parks which have engaged our attention during the year. Of the various problems upon which the Board has asked our advice and for which we have prepared plans or conferred with the General Superintendent we will refer briefly to the following:—

STREET TREES.

During the past summer it was generally noticed throughout the whole Metropolitan District of Boston that certain unusual conditions of climate or the ravages of some disease had caused the decline and death of a great number of trees. Young trees and old, even in the wildest districts of the reservations, were stricken as well as those in the hearts of towns and cities. Within the limits of Cambridge many elms and maples failed and the usual mortality among the street trees was greatly increased over previous years. The examinations which we made lead us to believe that while unfavorable conditions of light, air, moisture, and soil might be blamed for the death of many of the trees in the streets of Cambridge, there were evidences that other agencies had been more active in their demise. We discovered the presence of insect pests and fungus growths, but these were insufficient to produce the effects noted, and they appeared rather to thrive through weaknesses already sapping the vitality of the trees than to have brought about the decline themselves. We were inclined to attribute the unusual death rate to protracted hot and dry weather immediately preceded by periods of unusual moisture during a season following a severe winter. We stated our theories of the causes and effects with some hesitation, however, because our field and methods of observation were limited.

LATIN SCHOOL.

We prepared plans for the approaches to the new Latin School building during the season, and we arranged these approaches with various plantations to relate to the approaches and plantations of the

adjoining buildings,—the High School, the Public Library and the Manual Training School,—to the end that the whole group should constitute one whole. The location of a flagstaff upon the Public Library grounds promised further to enhance the effect of unity between the buildings. In consideration of the absence of squares or playgrounds in the neighborhood of the school buildings, we advised that the whole area between the Latin School and the English High School be retained as a large school yard, and we further advised that the narrow piece of unused land just north of the Latin School and adjacent to a vacant lot be levelled and a running track for short dashes be laid out upon it. Our plans provided for plantations of shrubbery and flowers on either side of the straight-away, in the hope that at recess time this part of the grounds would constitute an especially attractive part of the complete path circuit of the Latin and English High School buildings. After school hours gates at the ends of the straight-away would isolate it for athletic purposes and prevent its use as a short cut between Trowbridge and Ellery Streets.

Plans for the various playgrounds and squares throughout the City have already been prepared, and we have only to note the successful progress of work and the healthy growth of plantations as well as the increasing usefulness of these areas.

CHARLES RIVER.

The greatest work which your Board has undertaken — the improvement of Charles River within the boundaries of the City of Cambridge — has shown marked advance toward completion during the past year. These improvements have not only gained for Cambridge a unique park landscape and solved a sanitary problem of great difficulty, but they have established a precedent for the preservation and utilization of the river banks as a public treasure which will go far to ensure them similar appreciation at the hands of municipalities who are fortunate enough to include other portions of the river course within their own boundaries. In our previous reports we have discussed at some length designs for the treatment of the banks as a whole, and we have entered into the details of takings, alternative courses, removal of private interests, shore protection, the handling of floods, the utilization of low land, the installation of walks, drives, shelters and plantations. We have also discussed the need of certain bridges and we have advocated a dam to hold the river at an even elevation. At the present time, therefore, we shall limit ourselves to a consideration of certain parts of the river banks which possess landscape features of such character as to lend themselves to special uses and treatments. Of these parts of the river shore we will refer to the following which have been the scene of particular activity during the past year.

THE ESPLANADE.

The main body of the Esplanade has been graded and planted, and the drives surfaced. The formal rows of trees are thriving. The ornamental plantations of shrubbery which were originally designed to be set out at some future time when it should appear desirable to provide walks and curbings, have been set out already. The plantations are so disposed that the walks can be accommodated to them in the future. The presence of the plantations appeared desirable to enliven the ribbon of green sward at this time, when it has no architectural support of any kind except the drives. The plantations, which are geometrical in plan and strictly formal, are made up of plants of close and rather low habit, although occasional specimens of higher growth appear at salient points for accent. Varieties of flowering plants, which can be depended upon to withstand the winds of an exposed situation as well as smoke and salt air, were especially sought for the plantations.

At present, entrance to the Esplanade is to be gained at its right angle intersection with Massachusetts Avenue at the northern end of Harvard Bridge, and at Main Strect, near West Boston Bridge. The esplanade remains to be connected at its western extremity with Brookline Street, or neighboring streets. These connections are of great importance, because it is through them that travel over the esplanade, both by foot and wheel, is to find its easiest and most attractive circulation. Upon the precise form of the connections will depend facility of entrance and exit, as well as landscape and architectural excellence, in the terminations of the Esplanade.

Upon the east the Esplanade meets Main Street diagonally at a point nearly opposite First Street after a long straight run of over a mile. The diagonal junction makes a formal termination of the vista and of the lines of the drive and promenades necessary if the Esplanade is to end in a dignified and effective manner. We propose to accomplish this formal termination by a circle of the width of the central grass plot occupied by a monumental shaft and backed by a dense plantation of trees and shrubbery. Access to the circle from Main Street will be had first, by means of a short length of curving road through the midst of the plantation, and second, by a short section of straight drive placed at right angles with the Esplanade and centered upon the circle. The first means of communication will serve the needs of travel to and from Boston, while the second means will afford a convenient course for travel toward the "East Cambridge Embankment" and to and from Cambridge and Cambridgeport. The second line of communication is especially needed to overcome the sharp angle of junction between the Esplanade and Main Street.

The problem of the termination of the western extremity of the Esplanade is a complicated one. The question of the Charlesmouth Bridge, the extension of various streets, the provision for convenient traffic communication, the overhead crossing of the branch tracks of the Boston & Albany Railroad, and many other matters, including among them questions of financial policy, are involved in it. We have presented several schemes to your Board for handling the problem, which we regarded as purely tentative, but of value as proving that the Esplanade can be safely carried at its full width as far as Erie Street without danger of conflict with future constructions. In its most general terms the treatment which we suggest for the present western termination of the Esplanade and for its connection by a link of drive with the Brookline Street district is as follows: The long central planting strip which occupies the centre of the Esplanade, and which extends for over a mile in a westerly direction from Main Street across Massachusetts Avenue toward Cottage Farm, should terminate for the present at Erie Street. At that point a circle and a shaft might be made to serve as a definite point of change in the course of the Esplanade, as has already been suggested for the eastern termination. The sea wall should end, temporarily, at a wooden bulkhead extending shoreward and at right angles with the masonry front. Beyond the bulkhead a beach shore should await the future continuation of the stone sea wall. Within the compartment formed opposite the end of Erie Street by the angular termination of the vertical shore protection and accented by the circular grass plot and its accessories, the southern drive of the Esplanade would find an end. The northern drive and the promenade, however, would continue to follow the river shore to Brookline Street, upon such lines that any one of the various schemes outlined for the future continuation of the southern drive, the completion of the sea wall, the extension of side streets, and the provision of a bridge opposite Ashby Street, can be made to bear an organic relation to it. During the period of years elapsing between the completion of the temporary termination and the partial extension, which we have outlined above, and the completion of the final plan, which is to solve the problem of bridges, traffic roads, road extensions and other matters, we believe that the temporary partial extension will amply provide for the needs of a parkway connection and present an aspect in keeping with the scenery of the improved parts of the river and the demands of a residential district. We also believe that the temporary form of termination of the Esplanade cannot fail to present a workmanlike aspect and to satisfy the need of vigorous architectural treatment in the line of drive at a point where it undergoes a change in direction, if not a change in arrangement.

CAPTAIN'S ISLAND.

During the past year your Board called upon us to study the extension of Granite Street and we reported with two plans. The first plan showed Granite Street extended upon its original lines to Brookline Street at the sacrifice of parts of several lots and the taking of one house and a part of an adjoining barn. The second plan showed an abandonment of the present line of Granite Street and a new location in a parallel position nearer the river. The second plan escaped all existing buildings and required smaller takings. Both plans called for the occupation of a part of the old rangeway.

During the past summer the ruin of the old Magazine, which has stood for years upon the border of the river, has been made a temporary shelter for dressing-rooms for bathers. Eventually it is to serve as an Administration Building for the playground and its accompanying field and bath houses. It is the intention of the plan which has been prepared for this district to provide bath houses for men and women on either side of the old Magazine. These buildings can be used as shelters in the winter season when the field is flooded for skating. The buildings are arranged to relate directly to separate playgrounds which occupy portions of the dyked area. The playground for men is in a suitable condition for base ball games and other athletic sports, but the playground for women and girls will require further filling to raise it to the required elevation. The Administration Building has utilized what little masonry the old Magazine could offer for walls and the addition of a roof, windows and various interior improvements has transformed it into a structure convenient for present uses.

A drive is contemplated upon the plan which is in effect a continuation of Magazine Street, and which approaches near enough to the water's edge to allow persons to view the shore and the bathers from carriages. The beach is over a quarter of a mile in extent, and a foot-walk is to be carried along its crest to connect with the various buildings. Upon the playground areas it has been possible to improve the natural condition of the ground by draining and by a surfacing of gravel placed upon the marsh-grass surface. The addition of loam to those parts of the Island which are too sterile to support vegetation will allow the maintenance of plantations of shade trees and shrubbery. As an indication of the popularity of this beach during the past summer, it is estimated that no less than twenty-five thousand persons have taken advantage of it, although neither of the secondary buildings have been erected as yet. The men and boys were accommodated at the Administration Building, but in the absence of other shelter the women and girls were dependent upon temporary buildings arranged for them.

The opportunities which the river affords for bathing and boating will always give a distinctive character to the Captain's Island playground and insure it a wide popularity. At present the centre of population is much further removed from it than from Cambridge Field or Rindge Field, but the attraction which water sports offer has already overcome the obstacle of distance, if the records of the last summer's patronage are evidence. Just what demand will be made upon the playground when the district about it is more thickly settled, is a matter which the future will prove and for which it must provide.

EAST CAMBRIDGE EMBANKMENT.

The plan which was prepared for the East Cambridge Embankment several years ago has lately been revised, in order to provide a bathing-beach somewhat as we originally advised. This involves the removal of a small portion of the existing sea-wall. The beach is to be four hundred and fifty feet in length. Although a greater amount of filling is in place at the southwesterly end of the embankment than at the opposite end, it seems advisable to place the beach at the southwesterly extremity. In that position the adjoining river-bottom at low tide will offer a less dangerous slope to bathers, and the beach will be further removed from a canal of comparatively foul water, which finds outlet near the north-easterly end. Moreover, the adjoining filled areas will give better support to the wing of planting and the walk which borders one end of the beach, if the beach is placed at the southwesterly end rather than at the opposite extremity of the embankment, where no filling has as yet been done. The plan shows a field-house placed midway between the playground proper and the beach. This field-house will provide accommodation for bathers as well as for persons engaged in field sports. A concert grove is arranged formally opposite the field-house, with a system of walks radiating from a band-stand to all parts of the grounds. The East Cambridge Embankment will therefore become a pleasant place of resort in the day-time on account of the facilities offered for bathing, playground exercise, and the shade of the groves and walks. During the evening hosts of persons, who are confined within doors during the day, will seek it as a place for rest and exercise, especially when music is provided.

CAMBRIDGE HOSPITAL SECTION.

The last plan made by us during the past year for your Board was prepared in connection with the treatment of that section of the banks of Charles River lying between the termination of the present constructions on Mount Auburn Street, near the Cambridge Hospital, and the holdings

of the Metropolitan Park Commission upon the southwest. The proposed taking lines are continuations of an important line in the constructed section which represents the side line of a roadway to be put through at some future time. Certain grading has already been carried out in the constructed section in preparation for the passage of this carriage-way. The plan prepares for the passage of this road not only in the taking line but also in the positions indicated for the planting of trees which are eventually to border the new thoroughfare. The cross-section which we advise for the new portions, and which provides for the tree plantations mentioned above, is similar in intention to the cross sections already accepted for the adjacent constructed portions. The proposed sections provide for a promenade twenty feet in width, in continuation of the present promenade, with a planting space upon the landward side toward the taking line also twenty feet in width. The grading is arranged upon contours that will require a minimum amount of additional work to be done when the driveway is carried through. Two styles of shore treatment can be applied to the shores bordering the arrangement described above. The first style of treatment calls for a gravel beach upon a slope not greater than one in five. The second style of treatment calls for a much steeper beach — one so steep that paving will be needed to protect it against the attacks of water and ice. This treatment will produce a shore of an evidently artificial character but it possesses the practical advantage that it will not intrude upon the limits of the present pier and bulkhead line as does the construction involved by the first style of treatment. We have made many studies in an attempt to reconcile the arrangement of planting spaces and the promenade with a beach of gentle inclination, and at the same time avoid trespassing upon the present pier and bulkhead line, but the available space is so constricted that we have found it impossible to produce a cross section which accomplished such a purpose without cramping the promenade and the planting spaces seriously and elimininating the shade trees altogether. As this sort of treatment would produce a river border radically different from the constructed portions adjacent to it, as well as one meagre and uninteresting in appearance, we abandoned it and returned to the cross sections first described. We were led to believe that the advantages gained by the beach of gentle inclination over the steep paved beach were sufficient to warrant a plea for a change in the pier and bulkhead line. An appeal was, therefore, made to the Harbor Commissioners to move the pier and bulkhead line, upon the ground that among other advantages the river course would be straightened thereby if the pier and bulkhead line upon the opposite shore were moved correspondingly southward to retain the present channel accommodations.

The Harbor Commissioners agreed to the change and the Metropolitan Park Commissioners allowed it as affecting their holdings upon the opposite bank. The matter now rests with the authorities at Washington for final settlement. We have suggested, as a fitting continuation of the promenade at its point of junction with the present holdings of the Metropolitan Park Commission on the Cambridge side of the river, that that Commission be requested to construct a walk past the supposed site of the house of Leif Erickson, and thence through a charming valley, near at hand, to Elmwood, the homestead of James Russell Lowell.

Respectfully submitted,

OLMSTED BROTHERS.

REPORT OF THE CITY ENGINEER

OFFICE OF CITY ENGINEER, CITY HALL,
CAMBRIDGE, December 1, 1899.

Geo. Howland Cox, Esq., Chairman Cambridge Park Commission:

DEAR SIR: — The engineering work performed in connection with the Park Department during the past year has been largely in completing contracts already made, and in setting out the work of improving the various sections which were to be finished by grading, loaming, planting, etc.

The important work of filling the Esplanade and adjacent private flats near Main Street was completed by the contractors about April 1, 1899.

The final estimates of this work and its cost are as follows:—

Main Street (narrow strip) . .	1,319 sq. ft. filled	$131 90
City Wharf lot	37,282 " " "	3,728 20
F. H. Rindge lot	10,635 " " "	1,063 50
B. F. Brown lot	33,090 " " "	3,309 00
Esplanade (not including area occupied by wall and ballasting)	426,300 sq. ft. filled	49,881 75
		$58,114 35

Of the above amounts it has been agreed that one half the cost of filling the "Brown" lot shall be paid by the owner.

The Esplanade has been substantially completed in grading and surfacing from the portions treated in 1898 and extending easterly for about 730 feet. Considerable work has also been done in finishing the Esplanade as extended westerly for a distance of about 920 feet. In connection with this grading of the Esplanade, 36 catch basins have been built to take off the surface water, and 1,600 feet of drain pipe for outlets to these catch basins have been laid.

A single roadway on the northerly side of the Esplanade has been graded and opened for travel from a point near Main Street at West Boston Bridge to the end of the completed section, a distance of about 2,540 feet. There has been a total length of roadway completed at the Esplanade of 7,720 feet, and about 7,900 feet of walks. In this connection also 364 shade trees have been set out.

The dyke, mentioned in my last report as partially completed, was finished by contractors Nawn and Brock, on May 13, 1899. A change was made in the location of the dyke at its easterly end to allow for the proposed location of a bath house near Brookline Street, so that some delay and increased cost was occasioned. The total cost of the dyke 1,151.6 feet long, including drainage ditch, sheet piling, and extra work, was $2,298.63.

The park roadway between Magazine Street and Brookline Street, about 1,200 feet long, partly filled at various times before, has been constructed and graded substantially to a width of 80 feet. Nineteen thousand eight hundred and twenty-one cubic yards of material were furnished by Mr. William B. Mullen for this work, at a cost of $11,496.18.

In all these fillings great difficulty has been experienced in keeping the surfaces to grade, owing to the constant tending to settlement. The marsh mud being in most cases deep and soft, when loaded even with a small amount of filling a settlement of the surface is at once noted. When loaded with ten feet of filling a settlement of as great as three and five-tenths feet has been observed. Of course, under these conditions, it is impossible to keep the surfaces of the filled tracts at the proper grade for any length of time.

At Captain's Island, where the old State Magazine has been made into a bath house and a bathing beach constructed, 3,022 cubic yards of gravel, dredged from the river, were used in making the beach, at a cost of $1,447.05.

Plans were made for enclosing the Washington Elm with a substantial granite curb. This was done, and the enclosed area dug up and filled with loam and seeded.

Various plans and estimates of a miscellaneous character have also been prepared for contemplated work; plans showing the proposed filling between the end of the seawall at the Esplanade and Brookline Street; plans showing proposed filling and change in seawall line between Brookline Street and River Street; also plans for proposed change in the line of Charles River between Boylston Street and the Cambridge Cemetery. Copies of these last two plans were also filed with the War Department at Washington, D. C. Plans and descriptions have also been prepared for the taking of a strip of land to be used for park purposes on the river bank, across land of the Cambridge Hospital.

Sundry plans have also been made for grading yards at the Latin and English High and the Peabody Schools.

Four assistants have been employed on park work during the season, two during the entire year.

Very truly,

L. M. HASTINGS, *City Engineer.*

REPORT OF THE ELECTRICAL DEPARTMENT

Office of the Inspector of Wires.
December 1, 1899.

To the Honorable, the City Council: —

I respectfully submit the first annual report of the Electrical Department of this City.

The work of this department comprises that which was formerly carried out by the Lamp and the Inspection of Wires departments. The consolidation of these two departments under one official took place on October 24, 1899, when the ordinance creating the Electrical Department was approved.

Until the appointment and confirmation of the City Electrician, the Inspector of Wires, who is also at the present time Superintendent of Lamps, acts as the official head of this department.

The work of this department can be grouped under the following heads: —

1. Inspection of electric wires in buildings.
2. Supervision of electric wires and poles in the streets.
3. Electrical construction work.
4. Consulting electrical engineering for the municipal departments.
5. Maintenance and operation of the Fire Alarm system.
6. Maintenance and operation of the Police Signal system.
7. Supervision of the Street Lighting of this City.

INSPECTION OF WIRES IN BUILDINGS.

All buildings in this City that are used for electric lights, heat or power, are inspected before they are supplied with current, to see that the installation of the wires has been done in a safe and proper manner. The beneficial results of this inspection, carried out for the past eight years, is shown by the fact, that to my knowledge, there has been no case of fire caused by electric wires in any building, for which an alarm has been sounded, during this period. There have, however, been numerous cases where trees in the street have taken fire, and several cases also have occurred where awnings and other fixtures on the outsides of buildings or on poles have taken fire.

So far this City has been very fortunate in this respect, due to the

fact that almost all the installations of wires in this City has been done within that period, so that not only has the installing of these wires been subject to rigorous inspection, but also it is of such a recent date that improved methods of installation have been adopted. It is only within the past ten years that this art has been well developed. It is for this reason that this City has had such a good record over other and larger cities where the wiring of buildings commenced at a very much earlier date.

This department has adopted and enforced the National Electrical Code of rules and requirements for the wiring of buildings.

The work the past year shows that 213 inspections have been made, while last year only 112 inspections were recorded. The number of visits made were 351, which considerably exceeds the number of inspections listed. While many defects have been noted, yet they have been easily and willingly corrected by the contractors. This work, as a whole, except in one or two instances, required only minor changes. In several instances, however, the wiring has been installed in a slip-shod manner so as to be unsightly, yet could not be condemned as being dangerous.

Agitation has already commenced towards the licensing of electric wiremen, as is now done in the case of plumbers and gas fitters. Already the State of Minnesota has passed a law to this effect. If such a law were passed in this State, it would undoubtedly tend to further improve the wiring and decrease the work of the inspectors.

The total capacity of sixteen candle power lamps installed the past year was 5,798. The number of low potential alternating current enclosed type arc lamps installed was twenty-nine. The motors installed were thirty-one in number and aggregated 151.75 horse power. In addition to this there were four electric elevator motors installed, whose total horse power was thirty-four. The total capacity as listed is of course far in excess of any actual consumption at any one time.

Your Inspector made an investigation as to the possibility of the electric wires being the cause of the fire in the Harvard Grammar School on March 21, 1899. The investigation commenced on the same morning as the fire and was because of a rumor that the electric wires were the cause of this fire. The entire electric wiring in the building consisted of only ten feet of circuit, nine feet of which was in a molding, and the other one foot in a circular loom cable. There was also installed one main fuse block, Sawyer-Mann type, one snap switch and one Prindle Receptacle, and, in addition, there was employed a flexible cable for use with the stereopticon. The voltage employed was only 104 volts. Your Inspector arrived at the scene of the fire shortly after the second alarm was sounded. At this time the window casing where the electric wires were located was

not on fire, and, moreover, the window was the last on that floor to fall in. The Inspector, on his arrival, caused the wires strung from the electric light pole across Broadway to their entrance at this window to be cut, in order to prevent their falling across the trolley wires when the window should give way. This also prevented a short circuit in these wires, and this is attested by the fact that the transformer fuses examined at the time of the fire were not blown. These fuses were later tested by the Electric Light Company, and found to be of the proper capacity.

Your Inspector feels that even were these wires bare of insulation in this building, instead of rubber covered as they were, that they could not have caused the fire, installed as they were in molding and circular low cable, and protected by fuses. The fuses at the entrance to this building were recovered, and the copper tips to the fuses were found, and they showed that the current was properly protected at the entrance. Moreover, your Inspector was informed by the party who first saw the fire and gave the alarm, that no fire was noticeable in the immediate vicinity of the windows where the wires entered and were located. Your Inspector, therefore, can say that he could find no indication, either by witnesses or from expert knowledge that would lead him to suppose that the wires in any way were the cause of the fire. He did, however, find strong evidence from witnesses and from electrical data recovered from the ruins and the transformer which furnished current to the building, conclusively showing that the electric wires were not the cause of the fire in the Harvard Grammar School.

POLE LINES.

No long continuous pole lines have been built the past year by any company. There have, however, been 108 poles set on the public streets of this City during the past year. Of these, thirty-nine belong to the Cambridge Electric Light Company, and sixty-nine to the Telephone Company. Last year the Telephone Company presented a petition asking for 236 pole locations on streets where they had no pole lines. These poles were to serve as distributing poles in connection with this conduit system. In the last annual report your Inspector stated that he believed about 200 of these were not necessary at the present time, as they could make use of the poles belonging to the Electric Light Company. Before the proper Committee of the City Government this year, he again advocated the compelling of the Telephone Company to make use of the Electric Light Company's poles in order to avoid duplication of poles in our streets. While not successful to that extent, your Inspector could not but feel gratified to find that only sixty-seven poles were granted out of the 236 locations asked for.

Your Inspector has in several other instances taken the same stand

before the Committee in regard to pole locations. While not successful in all cases, yet he nevertheless believes that it is a fallacy to grant any pole locations, except for very special or urgent reasons, to any company when another company maintains a pole in the immediate vicinity capable of serving the uses of both companies. If the pole already set is not sufficiently strong to carry the additional load of wires, then the same should be replaced, and not another location granted.

Your Inspector does not believe it is a sufficient reason to say that a company should have exclusive control over its poles used as conduit outlets. Your Inspector believes that the City's rights to free and unobstructed sidewalks and streets are paramount to any rights that the company may wish, providing suitable facilities are offered for conducting their business. Of what these facilities should consist, the City should be the judge, not the company.

At the present time a petition is pending before your honorable body, asking for a relocation in Putnam Avenue for a telephone pole line. This avenue at the present time has an iron pole line on each side of the street belonging to the Street Railway Company, and also a wooden telephone pole line on one side. Your Inspector, therefore, recommends that on one side of the street the iron poles of the railway company be removed, and that their span wires be attached to telephone poles on that side of the street. These latter poles to be so located as to allow this to be done. If this be done, then twelve poles can be removed on Putnam Avenue, between Pleasant and Brookline Streets, without the curtailing of facilities now enjoyed by either company.

The past year has seen considerable improvement in regard to the Telephone Company's pole lines in this City. This is due to the fact that a large amount of both overhead wires and cables have been removed, as well as cross-arms in many cases. This was brought about by that company placing their wires in underground conduits. This has resulted in an improved appearance, and renders the pole lines less conspicuous on the City streets. It does not, however, remove any poles. The overhead cable formerly entering the City Hall and crossing Inman Street, has been placed underground this year. This year the poles of the different operating companies which were not painted have been painted, thereby giving an improved appearance to our streets.

Tabulation showing poles set in the public streets on December 1, 1899, and by whom owned: —

Cambridge Electric Light Company	3,047
New England Telephone and Telegraph Company	912
West End Street Railway Company	841
City poles for Fire Alarm service	6
Total number of poles set on public streets in the city, December 1, 1899	4,806

These poles are all wood, except 816 round iron poles owned by the West End Street Railway Company.

Tabulation showing joint ownership in poles on December 1, 1899: —

Cambridge Electric Light Company and New England Telephone and Telegraph Company	14
Cambridge Electric Light Company and West End Street Railway Company	753

List of attachments by one company to another company's poles, on December 1, 1899.

Cambridge Electric Light Company on New England Telegraph & Telephone Company's poles	173
New England Telegraph & Telephone Company on Cambridge Electric Light Company's poles	547
New England Telegraph & Telephone Company on West End Street Railway Company's poles	81
West End Street Railway Company on New England Telegraph & Telephone Company's poles	186
Western Union Telegraph Company on New England Telegraph & Telephone Company's poles	58
Fitchburg Railroad Company on New England Telegraph & Telephone Company's poles	4
Postal Telegraph Company on Cambridge Electric Light Company's poles	43

Number of permits issued to the New England Telegraph & Telephone Company to string wires the past year was 304.

CONDUITS.

The following tables show the amount of conduit laid this year, as well as the enlargement made to the conduit laid in 1888. The only company which has laid any conduit this year has been the New England Telephone and Telegraph Company. All conduits laid in the city so far are constructed with either the cement lined pipe of the National Conduit Manufacturing Company or else the vitrified tile duct made by the Camp Terra Cotta Tile Company. The outlets at the poles themselves are finished with a three inch round iron pipe. The outlet ducts themselves are in general of the cement lined pipe conduit.

New England Telephone and Telegraph Company's conduit laid in 1899: —

Street.	From	To	Length.	Ducts.	Duct Feet.
Bridge Street	Somerville Line	Cambridge Street	2,045.9	8	16,367.2
Magazine Street	Putnam Avenue	Glenwood Street	835.3	3	2,505.9
Mt. Auburn Street	Homer Street	Last manhole	605.1	9	5,445.9
Mt. Auburn Street	Last manhole	Watertown Line	70.0	7	490.0
Norfolk Street	Massachusetts Ave.	Austin Street	336.7	2	673.4
Prospect Street	Massachusetts Ave.	Austin Street	333.6	2	667.2
Springfield Street	Cambridge Street	Somerville Line	305.0	1	305.0
Third Street	Cambridge Street	Bridge Street	547.7	3	1,643.1
			5,079.3	....	28,097.7

New England Telephone and Telegraph Company's enlargement in 1899 to conduit laid in 1888: —

Street.	From	To	Length.	Ducts.	Duct Feet.
Main Street	Broadway	W. Boston Bridge	1,270.9	8	10,167.2
Massachusetts Ave.	Main Street	State Street	398.0	2	796.0
Massachusetts Ave.	State Street	Albany Street	1,048.4	3	3,145.2
Massachusetts Ave.	Albany Street	Railway Crossing	259.2	3	777.6
Massachusetts Ave.	Railway Crossing	Harvard Bridge	1,460.3	3	4,380.9
			4,436.8	....	19,266.9

Total lengths and duct feet of conduit in this City: —

	Length.	Duct Feet
West End Street Railway conduit laid in 1897 . . .	6,236.28	138,195.1
New England Telephone and Telegraph conduit laid in 1888 .	11,616.1	75,343.7
" " " " " " 1898 .	55,196.0	470,839.4
" " " " " " 1899 .	5,079.3	28,097.7
" " " " " enlarged .		19,266.9
	78,127.68	731,742.8

Total length of conduit laid in this City, fourteen and three-fourths miles.

Conduit outlets for distributing purposes for the New England Telephone and Telegraph Company conduits have been laid the past year as follows: —

Total number of outlet connections made	118
Number of telephone conduit outlets	113
Number of special outlets, for city use	5
Number of outlets for city wires (total)	34
Total length of conduit for outlet connections . . .	11,353.7
Total length of duct for outlet connections	14,001.5

The county commissioners laid this year a tunnel across Otis and Thorndike Streets which is used in part to carry their lighting wires.

THE PRESENT CONDUIT SITUATION IN THIS CITY.

At this time, I believe it proper to call the attention of the City Council to certain facts and data in relation to the overhead wire problem of this City. This, your Inspector does in order that the City Council may take such steps as will lead to an abatement of the present overhead wire nuisance. It is a matter that should be immediately acted upon in order that some means may be devised or plan adopted which will materially reduce the present number of overhead wires. The adoption of some method this winter for the general placing of wires underground will enable actual commencement of such an undertaking to begin in the early spring.

With this object in view I would respectfully call your attention to some facts and figures which have been compiled with the idea of simply summarizing what has been accomplished so far in this city towards the removal of the overhead wires from our streets.

The following table shows the number and ownership of poles set in the public streets of this City on December 1, 1899: —

Cambridge Electric Light Company	3,047
New England Telephone and Telegraph Co.	912
Boston Elevated Railway Co.	841
City poles for the Fire Alarm service	6
Total number of poles	4,806

The following table shows the number of poles owned by the Cambridge Electric Eight Company on July 1 of each year for the past five years: —

Poles set on July 1, 1895	2,098,	an increase of 274	over 1894
" " " 1896	2,549,	" 451	" 1895
" " " 1897	2,744,	" 195	" 1896
" " " 1898	2,869,	" 125	" 1897
" " " 1899	3,015,	" 146	" 1898

A single pole line will average about forty-five poles per mile of street.

The following table shows the number of feet of of conduit laid; also by whom owned and when laid: —

New England Telephone Company laid in	1888,	11,616 feet
" " " "	1898,	55,196 "
" " " "	1899,	5,079 "
West End Street Railway Company "	1897,	6,236 "
Total length of conduit in city		78,127 feet.

In 1899 the New England Telephone and Telegraph Company enlarged 4,436.8 feet of their conduit laid in 1888, and also made 118 outlet connections with poles which required the laying of 17,353 feet of duct.

The New England Telephone and Telegraph Company has 13.5 miles of conduit laid on the principal streets of this city. This conduit allows that company to place the majority of their heavy distributing cables underground, but with few exceptions they distribute entirely overhead from their own poles or poles of other companies. The installation of this conduit system has only in six instances diminished the number of poles owned by that company. Their conduit installation of 1898, in the majority of cases, was on streets upon which they owned no poles, or else maintain both poles and conduits They maintain both poles and conduits on Cambridge Street, Main Street, Mt. Auburn Street, Bridge Street, Broadway, and a part of Massachusetts Avenue.

The Boston Elevated Railway Company has 1.2 miles of conduit laid, principally on Boylston and Mt. Auburn Streets, and in Harvard Square. This conduit is adjacent to their Harvard Power Station, and was necessitated by the building of that station. While it removed considerable of their heavy overhead wires on the streets upon which the conduit was laid, it did not remove a single pole.

The Cambridge Electric Light Company owning 63 per cent. of the poles set in this City has no wires laid underground in conduits. Moreover their poles now set exceed those owned by them in 1895 by over 43 per cent. This is an average yearly increase of over $8\frac{1}{2}$ per cent.

The Western Union and the Postal Telegraph Companies own neither poles nor conduits in this city, but make use of the poles of the Cambridge Electric Light Company and the New England Telephone Company to support their wires. It is a fact that so far only about half a dozen poles have been removed due to the installation of over $14\frac{3}{4}$ miles of conduit in this City.

A historical summary of the conduits laid might be made as follows: —

In 1888 the New England Telephone Company laid 11,616 feet of conduit, but did not remove any poles from the streets upon which their conduits were laid.

In 1897 the West End Street Railway Company laid 6,236 feet of conduit and removed some of their overhead wires but did not remove a single pole from the streets.

In 1898 the Telephone Company laid 55,196 feet of conduit, but the order of grant did not provide for the removal of more than ninety-five poles at a maximum and probably less will be removed. At the present time, however, only six have been removed, although some will undoubtedly be removed next year. This year, however, has seen sixty-nine pole locations granted to the Telephone Company for use in connection with their conduit system, consequently, the conduits laid in 1898 by that company will not probably lead to any reduction in the number of poles.

In 1899 the Telephone Company laid 5,079 feet of conduit which was a continuation in part of some of the work not finished last year on account of winter weather setting in, and some also was for an extension to their present telephone system. This year they also enlarged 4,436.4 feet of their conduit laid in 1888 and made 118 outlet connections to poles, which required the laying of 11,353.7 feet of duct.

The installing of cable this year in their underground conduits has, however, allowed that company to remove a large amount of overhead wires and cables, which has lessened to some extent the objectionable features of overhead construction.

It is the wires of the Cambridge Electric Light Company which

must first be placed underground before any results will be apparent to the eye. This company, as I stated before, possesses 63 per cent of the poles set in this city. It is, moreover, a local company, and derives its income entirely from this municipality or its citizens. The city alone pays about 45 per cent of its total income for street and public building lighting. It will thus be at once apparent that any outlay that the company may make for conduit construction must be borne by our citizens individually and also as a municipality in the direct proportion of profits accruing from its income derived from these sources.

Moreover, any such conduits as may be constructed by the Cambridge Electric Light Company will have to be met by an issue of bonds, as their surplus will not permit of a sufficient outlay for the burial of their wires at the present time. It is very unlikely that such a bond issue will be for less than 6 per cent, while, if the City issued the same, it could secure the money at $3\frac{1}{2}$ per cent.

Annexed herewith is their manufacturing and profit and loss account for their fiscal year ending June 30, 1899.

MANUFACTURING ACCOUNT.

Operating expenses	$80,843 08	
Income from sale of current		$149,995 20
Balance to profit and loss	60,152 12	
	$149,995 20	$149,995 20

PROFIT AND LOSS ACCOUNT.

	Dr.	*Cr.*
Balance June 30, 1898		$6,764 66
" of Manufacturing Account		60,152 12
Interest paid	$13,741 47	
Dividends declared	15,000 00	
Depreciation	25,000 00	
Other items	500 00	
Balance June 30, 1899	12,675 31	
	$66,916 78	$66,916 78

The City Government of this city has taken cognizance of this subject for several different years, and have sought to secure State legislation authorizing the establishment of a municipal conduit system. With this object in view, one of her representatives introduced into the Legislatures of 1893–4–7, bills which would grant to the cities the right to establish a municipal conduit system. These bills, however, failed to pass, through the opposition of the Telephone Company, although it was not opposed the last two times by the railway or electric light companies.

Four methods only appear to your City Electrician which will lead to a solution of this overhead wire problem. They may be enumerated as follows:

Execution of a voluntary agreement between the City and the different companies operating pole lines for the burial of their wires.

Secondly. Compulsatory State Legislation.

Thirdly. The licensing of a conduit company.

Fourthly. The establishment of a municipal conduit system.

Voluntary agreement between the City and the different companies would assure that a certain amount of wire would be placed underground each year. Such an agreement should, however, provide that the individual conduits on the same street should be laid at the same time. This method would probably mean a duplication of man-holes and an unnecessary occupation of the sub-surface of our streets.

Compulsatory legislation would give the City the right to order the wires now strung overhead to be placed underground. This method is the one which is pursued in Boston. It is open to the same disadvantages as the previous method.

Compulsatory legislation authorizing the granting of a franchise to a subway company, which will have the right for the burial of all wires when the City shall order them to be placed underground. This is the method pursued in New York City. New York City, however, reserved the right to purchase conduits after ten years. This, in my judgment, possesses many advantages over either of the two previous methods.

The establishment of a municipal conduit system would, in my judgment, assure the city of the most complete system at a minimum cost. This is the method which has been adopted in Baltimore, Maryland, and which was also recommended for Washington, D. C., by an expert commission appointed by President Harrison.

This City owns and operates about 131 miles of wire, all of which is overhead except for a short cable extending to City Hall from the corner of Green and Pleasant Streets, and two wires on Massachusetts Avenue, from LaFayette Square to Harvard Bridge. These latter are in the Telephone Company's cable and are used through the courtesy of that company.

In all conduits laid in this City there is reserved one free duct for the use of the City. This amounts to about fourteen and three-fourths miles at the present time. If the City would avail itself of this privilege and place such wires as are possible underground, the following results would be obtained: —

In Station One district, fifteen police boxes could be connected underground out of a total of thirty-one.

Station Two district could have fifteen boxes out of twenty-seven likewise connected.

Station Three could have eight boxes out of seventeen given underground connections. In other words fifty-one per cent of all the police boxes could be connected with the police stations with underground cables. Moreover the entire police private telephones connecting the different stations could be laid underground.

The fire alarm system could have forty-three out of a total of one hundred and sixteen fire alarm boxes connected by underground wires. Every engine house except 6, Chemical 2 and Truck 2 could be reached underground. Two short conduits would allow Engine 6 and Truck 2, to be reached underground. That is, seventy-five per cent. of the apparatus houses can now be reached, and with the installation of a little conduit all except one could be reached. This would mean ninety-one per cent. would have underground service.

It is needless to say that the placing of the city wires underground would result in increase of service for both departments. It is an impossibility at the present time to give an entirely satisfactory police box telephonic service with the present system and overhead wires.

Another matter that should be decided this year is where the Central Fire Alarm Station shall be located, as I think it is perfectly evident to everyone that its present situation, in a building occupied by many other parties is not a suitable location. This location should be decided in order that, when the city wires are placed underground, they can be laid out and properly proportioned for the service required of them for many years to come, without the necessity of pulling them out of the conduits and replacing them by other cables of larger capacity, due to the change in the location of the Central Station, for it is in this latter station that all fire alarm wires must centralize.

In conclusion I would bring to your attention several matters that are directly related to this matter of conduits. The past year has seen an increase in voltage of the primary voltage of the Cambridge Electric Light Company's alternating currents from 1000 to 2000 volts. Moreover their street lights operate on 3500 volts, which was not the case several years ago. This increased voltage has a tendency to increase the damage done to the trees, from the fact that it is almost impossible to maintain good insulation on such lines as pass through trees.

By statute law all the money received from the Street Railway Companies in a City must be expended on its streets. The effect of this law will be to improve our streets, and permanent improvement in them can only be secured by road building. It is then essential that such a road bed when once laid should not be disturbed; therefore, it is

necessary that in the next few years, on those streets where permanent improvements are to be made, the wires be buried before the street is improved.

I wish also to bring to your attention the desirability of reserving to the City the right to authorize the attachment of wires and cables to the Elevated Railway structures when they shall be erected. This right should be reserved in the grant and should not only provide for the attachment of all municipal wires and cables free of expense, but should also provide for the attachment of wires and cables of all other companies at a reasonable compensation, whenever the same should be authorized by the City. If this arrangement be made, then practically all poles can be removed from those streets upon which the Elevated Railway may erect these structures.

ELECTRICAL CONSTRUCTION WORK.

Very little electrical construction work outside of that on the Fire Alarm and Police Telegraph system has been attempted this year. This department was unfortunate in losing at a busy time in the year two of its members by resignation, which, occurring at the vacation periods of the other members, unavoidably delayed the department work. The result of this has been that much wiring work in school buildings done in years past by this department, was done this year by contractors. Such work, has, however, at the request of your Superintendent of Public Buildings, been supervised by your Inspector.

The department has, however, looked after the bells, gongs, etc., in the schoolhouses as in years past. The department also installed the cables for telephone service, and storage battery current that were laid from the pole on Trowbridge Street into the Latin School. The underground duct for this cable was laid by the Sewer Department.

SUPERVISING AND CONSULTING ELECTRICAL ENGINEERING.

The Electrical Engineering work the past year has consisted of the preparing of Specifications for the wiring of the Boardman, Putnam and Harvard Schools, as well as the supervising of this work.

Your Inspector also prepared the preliminary specifications for an electric elevator for City Hall, and reported afterward upon the different types of elevators that were submitted with their specifications. Afterwards he drew up and prepared the final specifications for the elevator for the successful bidder. All of this work has been done at the request of Mr. Gray, Superintendent of Buildings.

FIRE ALARM SYSTEM.

This year has seen many important additions to the details of the Fire Alarm System. The central station has been nearly entirely rewired, and the wiring of the same has been simplified as far as possible, with the present arrangements. A Ruddick three-dial transmitter has been set up and connected into service. This provides duplicate machinery for the transmittal of an alarm of fire and does not make the City rely upon the continuous operation of one instrument as formerly.

A set of storage batteries, 187 in number, has been purchased, and will be used as soon as our battery switch-board is completed. This battery switch-board, now being built at our Central Office, is arranged for twenty circuits and duplicate sets of storage batteries, although at present only one set is to be used. This will decrease the liability to stray blows on fast time service, and, moreover, allows us to dispense with the maintenance of our 325 cells of gravity battery. This latter necessarily means considerable saving in expense to the department.

At the beginning of this year it was thought advisable to place some of the City wires underground, and an appropriation was made for this purpose, based upon a cable cost of twenty-five cents per foot for cable. This cost was the price asked for a ten pair copper conductor rubber insulation lead covered cable in January last. In August last, however, the same cable cost thirty-seven cents, and, consequently, only about two-thirds could have been laid. A short section from the corner of Green and Pleasant Streets to the City Hall was, however, laid in order to allow for the installation of a police box in the City Hall. Owing to this large increase in the cost of cable, it was thought advisable this year to take this money and purchase fire alarm and police boxes and keyless doors. Such was the decision reached after consultation between the Mayor and the Wire Committee from the City Council. In consequence of this, six additional fire alarm boxes, eighteen keyless doors and ten police boxes were purchased, and will soon be installed.

All of the fire alarm boxes this year have been given two coats of red paint and one of varnish. In addition to this, about sixty-three poles upon which boxes were located have been given a three-foot band of red paint, similarly applied, to better show the location of a fire alarm box. Also seventy-five globes for the arc lights have been given a three-inch band of red color to designate the location by night of a fire alarm box. These, while not yet installed, will soon be placed in service, and if found satisfactory will be so maintained.

New fire alarm boxes numbered 145, 151, 176, of the trigger pull,

spring box, Gardner type, have been installed this year. These boxes are all equipped with telephone jacks and keyless doors. The other six boxes and eighteen keyless doors will soon be installed.

The total number of bell alarms sounded this year, exclusive of "no school" signal, was 222. This includes four seconds, one third, and one general alarm. This was eighty-three more than last year. In addition to this there were eight "no school" signals given.

No extensive repairs have been made to the outside circuit wires the past year, beyond a general overhauling and tightening-up of the wires this Fall. There have, however, been extensions made to our fire alarm circuits to allow for the installation of nine fire alarm boxes. Changes have also been made in the location of several boxes, in order to make their location more prominent, and, if possible, to bring them under a street light.

Your Superintendent would again this year recommend the substitution of reverse current magnets, in place of the direct current magnets, in the fire alarm strikers and whistles that are not at present so equipped. This would obviate the present need of relays and local batteries, and would therefore render the service more reliable. Your Superintendent would also recommend that all boxes not now equipped with non-interference pulls be so equipped. These pulls, if installed, would prevent the possibility of a mixed-up alarm from one of those boxes, due to the pulling of the box several times in immediate succession.

I would also recommend that sufficient appropriation be made for the ensuing year to allow for a night operatar at our central station. At the present time the city has no night operators except those of the day force who sleep at the central station. All reports or alarms received or transmitted at the central station during the night require that an operator should be awakened from sleep. The strain upon the operator has been such that it has resulted in the breaking down of the health of two men during the past four years, who have been compelled to resign therefore from the service. The position is a responsible one, and ought to have an operator awake and on duty both by night and by day.

Again this year must I call the attention of the City Council to the obvious need of a new Central Fire Alarm station, as well as providing for the burial of the wires of the City Fire Alarm and Police Telegraph Systems.

The necessity of a Central Fire Alarm Station is made prominent by two factors. First, the unsuitability of the present Central Station in its present arrangements and housing. Secondly, from the fact that the time has now come for the City to bury its wires. When this is done it should be arranged so that they may remain undisturbed for a period of years,

and consequently the center of distribution of such a system should remain fixed. If such a provision be not made then much necessary expense will later fall upon the City if this center of distribution be changed. This necessitates therefore, that the location of the Central Fire Alarm Station be now fixed for the future.

The Fire Alarm System is to the Fire Department what the signal system on board a battleship is to the gun crews. In this latter case the system centralizes in the conning tower and is therefore most carefully protected from all injury as far as it is possible to do so. Likewise in the case of a City Fire Alarm System, the center of distribution or Central Station should be protected from fire or injury as much as possible. Likewise its distributing wires should be placed underground to assure the continuous operation of such a system.

The present Fire Alarm Headquarters are located on the third floor of the Brattle Square Building. This building itself is far from being fireproof, and, moreover, is occupied for several different purposes. It should be borne in mind that even if the Fire Alarm System quarters did not take fre, but should be drenched with water in case of fire in another part of the building, that this would probably result in a paralyzing of the Fire Alarm System for a short period of time at least.

There are at the present time entering this station, independent of the police signal system, twenty-one metallic circuits, numbering forty-two wires. This comprises ten box circuits, three fast-time circuits, two local circuits, and six telephone circuits.

The present apparatus room is not conveniently situated in respect to the other rooms of the department. The individual pieces of apparatus and their wiring is not so mounted as to be readily accessible. The apparatus should all be mounted upon slate, and arranged as in all new model central stations in conformity with good engineering practice. While many improvements have been made towards this end, yet it will be impossible to remedy this without entirely renovating the present Central office.

In addition to these defects, there is not a properly equipped work shop or store room for the use of this department. The emergency wagon is kept in a basement totally unfit for such use, and the horse for the same is kept upstairs in Truck No. 1's house. The other two teams of the department are kept at private stables.

Your Inspector, therefore, urgently requests that steps be taken at the beginning of the ensuing year to decide whether a new Fire Alarm Station shall be built, and where, in order that the fire alarm wires may be put underground next year. The City has at present 14.7 miles of duct ready to receive the wires.

This year saw the resignation of two members of this department, namely, Mr. Francis T. Axtman and William C. Pierce, both of whom were proficient men. Their places have been taken by Wilmot H. Kay and Herbert W. Berry, the latter, fortunately for the City, had had several years' experience in similar work, and therefore was enabled to assume the duties without any apprenticeship period.

POLICE SIGNAL SYSTEM.

This year the work of rewiring and overhauling all the police boxes which commenced last year was continued and completed. This was the first time that all the police boxes in the City had been taken to the Central Station and cleaned. They had been formerly cleaned and repaired in position. This simplification of the box wiring has resulted in better service being secured. This summer all boxes were equipped with "long distance" transmitters and receivers, leased from the American Bell Telephone Company. The installing of their instruments has very materially reduced our telephonic instrument troubles and improved their service. It has not, of course, affected our induction troubles.

One of the most difficult and yet most essential services to secure is the telephonic service between the patrol boxes and the police stations. Notwithstanding the good telephonic instruments which we now use, this service is not satisfactory at night after the arc lights are lit. This is due to induction troubles, which are caused by the induced effects especially of the arc light wires upon our police signal circuits. Using for simplicity, as we do, a series system, we cannot balance our circuits so as to neutralize this induction effect. Our only remedy is overhead or underground cable for our circuit wires. To equip our system with the cheapest satisfactory kind of overhead cable would cost about $3,000. This amount of money could much better be spent towards placing these wires in underground cables. At the present time half of our police boxes could be reached by cables if run through the ducts which the City now possesses.

During the past year thirteen police boxes have been purchased. Eleven of these have been secured at a reduced price, and been rebuilt by this department to standardize into our other boxes. Eight of these have been installed, and the remaining five will be installed during the coming month.

This department urgently needs a new time stamp, in order that the present time stamps in use on our three police tables can be cleaned and repaired without the necessity of doing without a time stamp while they are being cleaned.

Storage batteries should also be purchased for use with the Station 1 system. Provision has already been made at the Central Fire Alarm Station in its battery switchboard to allow for such use. The only cost would be the cost of the batteries.

REPORT OF STREET LIGHTING.

The lighting of the streets and public squares of this City, was, until October 24, 1899, under the control of a department known as the Lamp Department. The head of the department was known as the Superintendent of Lamps. By ordinance approved October 24, 1899, that department was consolidated with the Inspection of Wire Department to form what is at present the Electrical Department of this City. The Superintendent of Lamps however continues to hold office until the appointment of a City Electrician. Your Superintendent of Lamps therefore begs leave to submit the following report upon the subject of street lighting.

The financial and statistical statements relating to street lighting for the past year are as follows:—

The amount appropriated	$72,000 00
Balance unexpended	19 58

The principal amounts expended are as follows:—

For arc lighting	$51,317 67
Incandescent	10,972 10
Welsbach gas	8,134 55
Salary of Superintendent	1,000 00

Expenses for electric lighting have been as follows:—

ARCS.

Amount of bills rendered	$51,524 49
Amount of deduction for outages	206 82
Amount expended for arcs	$51,317 67

INCANDESCENTS.

Amount of bills rendered	$11,005 19
Amount of deduction for outages	33 09
Amount expended for incandescents	$10,972 10

WELSBACH GAS.

Amount of bills rendered	$8,158 67
Amount of deduction for outages	24 12
Amount expended for Welsbach gas	$8,134 55

The number of hours in which one or more lamps have failed to burn is:—

For arc lamps	5,170½
For incandescents	3,309
For Welsbach	2,412
Total outages	10,891½

	Maintained by Lamp Department.	Park Department.	Bridge Department.
Arcs	507	13	13
Incandescents	364	2	42
Welsbach gas	280		
Welsbach naptha		35	
	1,156	50	55

Total Street, Park and Bridge lamps maintained by this City on November 30, 1899, 1,261.

Year.	Appropriation expended.	Number of oil lamps.	Number of gas lamps.	Number of Welsbach gas lamps.	Number of incandescents.	Number of arc lamps.	Total number of lamps.	Outage hours for electric lamps.
1890	$49,269 02	98	722 4 feet		197 32 c. p.	116 2000 c. p.	1,133	17,457
1891	47,989 92	98 7 naptha	637		143	164	1,049	36,805
1892	63,862 68	56	299 5 feet		114	437 1200 c. p.	906	10,254
1893	66,615 93	32	300		168	447	947	7,166
1894	68,938 81	29	302		204	447	982	8,502
1895	69,926 61	25	296		233	448	1,002	6,776
1896	67,325 31	24	287		266 40 c. p.	471	1,048	7,027
1897	69,264 96	23	21	259	297	498	1,098	9,616
1898	69,182 20			266	363	515	1,144	56,194
1899	71,980 42			280	369	507	1,156	8,479

The attention of the City Council I would respectfully call to the foregoing table. A perusal of it will show in a general way the increase in the number of lamps, and also the increase in the illumination of the same for the past ten years. The compilation will also show that there has been a decrease in cost per lamp during the period covered by the table.

In respect to the appropriation for lighting, it will be noticed that there was an increase of $16,000 in 1892 over that of 1891, or $14,000 more than for 1890. From 1894 to 1898 except for the year 1895, the appropriation expended was annually about $69,000. The past year, however, has seen an increase of about $3,000 more than was ever expended except in 1895, and it exceeded the appropriation that year by $2,000.

The oil lamps, numbering 98 in 1890, were decreased yearly until they were abolished in 1897. In that year they were replaced by incandescent lamps, which necessitated an additional expense of $281.00, or $12.22 per lamp. A much better illumination, however, was secured.

In 1890 the gas lamps numbered 722, but were decreased the next year to 637. In 1892 the number of gas lamps maintained was only one-half that of the year previous. Moreover, during this year, the lamps were equipped with a five-foot burner in place of the four-foot burner previously used. The effect of this change was to increase the illumination. From 1892 to 1897 the number of lamps maintained was practically the same. During the months of November and December, 1897, the gas lamps were replaced by the Welsbach gas lamps. This substitution not only greatly increased the illuminating power of those lamps, but decreased the cost of maintenance of the same by $644, or $2.41 per lamp. At the same time by a contraction of the routes the time required to light and extinguish the lights was diminished. The past year the hours of lighting of the Welsbach lamps has been increased two hundred hours per lamp without additional expense to the City.

The incandescent lamps numbering nearly 200 in 1890 decreased yearly until 1892, when they numbered only 114. From then they gradually increased in number. The cause of this decrease will be found to be due to their replacement by arc lamps. Until 1896, the incandescents were of 32-candle power, but during that year they were replaced by a 40-candle power lamp, without additional expense. A large increase was noticeable between 1897 and 1898. This was due to the substitution of the incandescents for oil lamps and also for some gas lamps where the lamp lighters' routes were contracted. There were also a large number of new lamps installed during that year. During the past two years there has been no large increase in the number of incandescent lamps.

The arc lamps numbered only 116 in 1890, but were increased fifty per cent in 1891. These two years the lamps were of the so-called 2000-candle power type, costing about fifteen dollars more per lamp a year than the 1200-candle power type. In 1892 these 2000-candle power lamps were replaced by the 1200-candle power or sub-arc lamps. It was during this year that they were adopted as the standard lamp for the main streets of the City, and, in consequence, a noticeable increase is apparent. The number installed on December 1 of that year was 437. From then until 1896 there was a gradual increase, but in 1896 they were increased by twenty-three. It was during that year that the price of these lamps was reduced from $115 to $100, which resulted in an annual saving of $6,720 on the 448 arcs then installed.

In 1897 there was a further increase of twenty-seven arcs, but many of these were lamps which were ordered in in 1896, but which were not in service until December, 1896, in consequence of which they appear in the report for 1897. In 1898 there was a further increase of seventeen arc lamps, while the number given for 1899 is eight less than for last year. This latter decrease is due to the fact that twelve arc lamps formerly maintained by the Lamp Department in public parks are now maintained by the Park Department. Were it not for this a small increase would be noted for this year.

While the total number of lamps in 1899 is only twenty-three more than in 1890, it must be borne in mind that the increase of arcs for the same period is over 400 and that the candle power of both the gas and incandescents has been increased.

The outage from 1894 to 1899 has remained nearly constant, although the electric lamps have increased 220 in number. The outage shown for 1898 includes the 50,982 hours due to the February blizzard of that year. The outage of both the arcs and the incandescents this year amounts to 8,479 hours, which is less than in 1897 or 1898, although the number of lamps has increased. The outage for the Welsbach lamps amount to 2,412 hours. The total amount deducted for all lamp outages is $264.03.

This year the Lamp Committee made two trips in the early part of the year and reported on all petitions presented to them. Owing to this early inspection and report upon these requests for lamps, their installation was completed in the early part of the year and exhausted the appropriation, notwithstanding the fact that only a few lamps were installed. In years past, the lamps have not been generally installed until the Fall, and consequently only a month or two of expense would devolve upon the Lamp Department for their maintenance during the fiscal year.

This department now maintains three distinct types of lamps, namely,

arc, incandescent and Welsbach gas lamps. All of these lamps are lighted from dusk to dawn, each and every night, and burn under a schedule of 3,900 hours of lighting per year.

Each of these lamps has its relative advantage, if price be considered, and its suitability must be determined for each individual case. The arc lamps are the so-called sub-arc, of 1,200 candle power, and cost $100.00 per year. The incandescents are of forty candle power and cost $30.00 per year. The Welsbach gas lamps are of sixty candle power and the yearly cost is $29.88.

All Bridge and Park lamps are now maintained by their respective departments. Formerly many Park lamps were maintained by the Lamp Department.

In many cases in this City, the arc lamps are located at street corners on one street and on the next parallel street they are placed midway between the intersecting streets. This was done to save expense, as it required one less lamp for the streets so lighted. It has this disadvantage, however, that the lamp placed in the centre of each block lights only one street, whereas, if placed at the street intersections it would light two streets. I, therefore, would recommend that the arc lamps so placed at present be changed to street corners and, if necessary, that an incandescent lamp be placed midway between the arc lamps.

Your Superintendent believes that a very large percentage of cases of insufficient lighting, if on thoroughfares, is caused by the heavy foliage which abounds in this City during the summer. It would be of inestimable advantage if in these cases the trees be trimmed out and their lower branches removed. In many cases I believe that this could be done without injury to the appearance or life of the trees.

Your Superintendent believes that a steadier and more reliable lighting could be secured if the present open arc type of lamp now used in our streets were replaced by an arc lamp of the enclosed type. This latter type is the one that has been adopted by the City of Boston for their street illumination. With this end in view your Superintendent would recommend that this matter be taken up with the Electric Light Company before the contract for the ensuing year is signed.

To the Chairman and members of the Lamp and the Wire Committees I wish to extend my thanks for the courtesy shown me the past year.

Respectfully submitted,

CHARLES F. HOPEWELL,

Inspector of Wires and Superintendent of Lamps.

REPORT OF THE CAMBRIDGE WATER BOARD

CAMBRIDGE, December 14, 1899.

To the Honorable, the City Council of the City of Cambridge : —

The thirty-fifth annual report of the Cambridge Water Board for the year ending November 30, 1899, is herewith submitted for your consideration.

The condition of the different water basins and the amount and quality of the water supply were so fully considered in the last annual report, that it is only necessary to say that no essential change has taken place during the year, the efforts of the Board having been mainly confined to the prevention of pollution of the water and the maintenance of the high standard heretofore established. The year has been marked by additional safe guards adopted to protect the purity of the water, and several possible sources of pollution have been removed.

One of the most important events of the year has been the adoption of rules by the State Board of Health, applicable to the Metropolitan and Cambridge Water Supplies, in order to carry into effect a statute of the Commonwealth, entitled "An Act relative to the pollution of sources of Water Supply," being chapter five hundred and ten of the acts of the year 1897. This act was passed on a petition of the city of Cambridge, and authorized the State Board of Health to make "rules, regulations, and orders for the purpose of preventing the pollution and securing the sanitary protection" of water supplies, and provided measures for abating accidental or intentional defilement of sources of public water supplies, especially drainage from farms, and imposed severe penalties for violation of the law.

These rules, if faithfully enforced, will adequately guard the public health from danger, and the Water Board propose to bring to the attention of the State Board of Health all such cases as may call for its action under the statute.

The Water Board, with this end in view, decided to purchase the so-called "Sargent Farm," in South Lincoln, which drained into a tributary of Stony Brook, which has been for some time a menace and a nuisance, although we have not been able to prove specific cases of pollution, so as to warrant action by the State Board of Health ; the local Board of Health

of Lincoln taking the ground that a prior right in the brook was held by Mr. Sargent, and that it was better for our city to purchase the place than to invoke its aid in a case where its power might be questioned. We are glad to be able to say that this menace no longer exists, and that the most dangerous place on our whole water system is now free from all possible pollution.

We desire to express our gratitude to the town authorities of Lincoln for refusing another license to the former owner, on account of the bad record of his former establishment for uncleanness, and for saving thereby our supply from the pollution which might come from another slaughter-house located near the brook. The local Boards of Health of Lincoln and Waltham have heartily co-operated with us in assisting to protect our Hobbs Brook system from pollution, and we are glad to express our appreciation of their successful efforts in that behalf.

We have also recently taken about eight acres of land belonging to Reuben Wyman, bordering on Hobbs Brook, immediately below and south of the Winter Street dam. This land was used for grazing and pasturage of cattle and swine, and necessarily would soon become a source of pollution. We trust that no more takings or purchases of land will be necessary, at least for a long time to come.

An important event of the year was the passage of an ordinance by the City Council prohibiting skating on Fresh Pond. Recent discoveries in bacteriology demonstrate fully the necessity of this action, and it is hoped that the people will appreciate the fact that the health of the great majority of the inhabitants is of far more importance than the amusement of the small minority who have heretofore been accustomed to skate upon the pond. Skating facilities can doubtless be provided elsewhere, as they are in other neighboring cities, where reservoirs of water used for drinking purposes are not used for skating. We are glad to be informed that the subject will receive the attention of the City Council, acting through the proper department.

FINANCIAL STATEMENT IN BRIEF.

The total cost of the Water Works to November 30, 1898, was .	$5,602,364 56
There was expended during the past year on Construction account	46,651 09
Making the total cost to November 30, 1899	$5,649,015 65

WATER BOND ACCOUNT.

The whole amount of bonds outstanding is	$3,272,100 00
From this is to be deducted the present value of the Water Debt Sinking Fund, including the note of the city for $200,000 00 .	665,583 82
Net Water Debt, November 30, 1899	$2,606,516 18

For further details as to the financial operations of the department, we refer you to the statement of the Registrar, which accompanies this report.

WATER BASINS.

On the first day of December, 1898, our water basins were all full, and water to the amount of about fifty million gallons per day was running to waste over the Stony Brook dam spillway. On the first day of December, 1899, our Hobbs Brook basin was five feet below high-water mark, and is falling daily, while the Stony Brook reservoir is being maintained at about three feet below high-water mark. Fresh Pond is about three feet below high-water mark.

The loss of water in our storage reservoirs is due not only to increased consumption, but principally to the unusually small rain-fall of the year, which has been about ten inches less than the average of previous years. With the ordinary amount of rain and snow during the coming winter and spring, there is every reason to believe that our basins will again be filled. Nevertheless, we must remember that other dry years are before us, and some provision must soon be made to meet the increasing consumption of a city whose constant increase in population demands either an increased supply of water, or more economy in its use. One of the items in the estimated cost of the development of our Hobbs Brook and High-Service System was the laying of another pipe from Stony Brook reservoir to Fresh Pond. The present thirty-inch pipe has at the utmost only a theoretical capacity of 8,500,000 gallons daily delivery. At the time these estimates were made it was expected that such additional pipe would be required in 1899. This brings us to the subject of

CONSUMPTION OF WATER.

The daily average consumption of water in 1898 was 7,650,195 gallons, or 85.69 gallons for each inhabitant. In 1899 the daily average has been 7,897,453 gallons, or 87.16 gallons for each inhabitant. Inasmuch as the conduit from Stony Brook has been flowing at its utmost capacity into Fresh Pond, and the pond is now falling or barely holding its own, it would seem clear that the capacity of the conduit has been overestimated, and is much nearer 7,500,000 gallons than 8,500,000 gallons.

In 1884 the daily average consumption for each inhabitant was 31 1-7 gallons or less than half the amount of consumption *per capita* in 1899. In 1890 the daily consumption *per capita* had risen to 62.35 gallons.

From that point the advance has been as follows:

In 1891	64.71 gallons.
In 1892	66 gallons.
In 1893	74.50 gallons.
In 1894	69.19 gallons.
In 1895	71.65 gallons.
In 1896	75.90 gallons.
In 1897	76.46 gallons.
In 1898	85.69 gallons.

These figures show clearly that some cause other than mere legitimate use of water is at work, and it cannot be doubted that the large increase in daily *per capita* consumption is due almost wholly to waste and leaks in pipes and water fixtures upon the premises of water takers. It is obvious that something must be done at once to stop this unnecessary waste, or a new pipe must be laid from Stony Brook to Fresh Pond. The cost of a new pipe at the present price of iron and labor would be between five hundred thousand and six hundred thousand dollars. For this sum bonds would have to be issued, under a new act of the Legislature, which should be applied for at once if it is to be needed, and the annual interest and sinking fund requirements would exceed thirty-five thousand dollars.

NEW CONDUIT OR A METER SYSTEM.

For some years the Water Board has advised the City Council that the increased consumption would before long require the laying of an additional conduit from Stony Brook. This year it became evident that such conduit must be laid, without delay, or else that the consumption must be reduced by controlling leaks and waste on the premises of the water takers. The Board, after careful investigation and consideration, extending over almost the entire fiscal year, finally concluded that the only reasonable course was the adoption of the meter system, which has been successfully and acceptably put into practice in Lowell, Worcester, Providence, Fall River, Pawtucket, Brockton, Taunton, Newton, Brookline, and many other cities, and so recommended to the City Council.

The daily average consumption *per capita* in these cities is about one-half of the consumption in Cambridge.

Our recommendation was based on the following reasons, viz.:

1. The Board did not feel warranted in incurring an expense of between five and six hundred thousand dollars in laying a new conduit from Stony Brook to Fresh Pond while, under a meter system, waste being checked, the present conduit would furnish sufficient water for ten,

and probably fifteen years to come, with the further probability that the saving in interest and sinking fund charges would be sufficient to pay for a new conduit when it should become necessary.

2. If a new conduit should be laid it would be necessary for the City to pay each year from the tax levy all, or a large proportion, of the interest and sinking fund charges on the bonds which would have to be issued in order to obtain funds for the work. The Board does not think it wise that the City should assume this unnecessary burden. The expense of the adoption of a meter system is comparatively small, and would not be a permanent burden to the City, as the water rates, without any substantial increase would soon repay the necessary outlay, if a small rental were charged for the use of meters as is customary in other cities.

We hope that early and favorable action will be taken by the City Council authorizing the adoption of a meter system, so that the work can be commenced immediately and the present waste of water checked.

As all our water has to be pumped, and each gallon of water represents a certain amount of coal consumed, the water-takers who are careful in the use of water and guard against waste are, under our present system, contributing to pay for the expense incurred by the wasteful and the careless, which is unjust. Under the meter system this injustice would be remedied.

ICE-WATER FOUNTAINS.

Over two years ago the Board purchased and set four ice-water drinking fountains, and has since maintained them and furnished the ice supply.

While we are willing to maintain the fountains, we feel that the cost of the ice ($609.00 per annum during the current year) should not be borne by this department, and suggest that some arrangement be made to relieve it of this burden, which has been especially hard to bear during the last two years, and will be hard for several years to come, owing to the fact that the income and strictly legitimate expenditures of the department are about equal.

CHARGES FOR RENT AND SERVICES OF CITY OFFICERS.

It seems desirable to call the attention of the City Council to the charges made to this department for rent of apartments in the City Hall, amounting to two thousand dollars, and for the services of the City Solicitor and City Engineer, amounting to one thousand and five hundred dollars, respectively, per annum.

While the department was in receipt of a large net income and made considerable use of the City Solicitor and Engineer, the charges did not

appear excessive, but at present, with our expenditures exceeding our receipts, as in the past two years, we think an abatement of the charges should be made except for services actually rendered.

As to the charge for rent no other department is obliged to pay such charges. Moreover, we were obliged to vacate the apartment formerly used by us as a shop, and yet no reduction has been made in the amount of the rent charges, although as a result of our vacating the shop in City Hall we were compelled to erect a shop at the Auburn Street yard of the Water Works.

RECEIPTS.

As last year, our expenditures have exceeded our receipts, the deficit this year being $240.27.

During the past year the Board has been deprived, by resignation from office, of the valued services not only of its President for many years, Hon. J. M. W. Hall, but also of Hon. Frank A. Allen, one of its most active and esteemed members. Both of these gentlemen had previously served the City with credit and distinction in the office of Mayor.

It is impossible to sufficiently acknowledge the long, faithful and intelligent service rendered the City by Mr. Hall. Elected a member of the Board in 1881, he served the City for eighteen years, the last five years as President of the Board.

The citizens of Cambridge can have but a slight knowledge of the inestimable value of Mr. Hall's devotion to the duties of his office. Especially during the inception and construction of the Hobbs Brook basin, as president of the Board he was called upon to give hour after hour, day after day, to the service of the city, to the temporary neglect of his private business interests. His devotion to duty as represented by the city's interests was something almost unparallelled, and has seldom been equalled.

He retires from the Board with the utmost respect and esteem of his fellow members, and with their heartiest best wishes that his success in business life may be as marked as was his administration of the affairs of the Water Board.

Mr. Allen is a splendid example of typical American citizenship. A successful business man, without any ambition for public life, but consenting to serve the city only because of the conviction that the best interests of the city demanded the sacrifice of his time and inclination. That he should have given five years of his time in the very busiest and most trying period in the construction of the water works, speaks volumes

in his praise. His long and varied experience in business rendered him an especially valuable associate, and his mature and sound judgment carried great weight in the Board.

Respectfully submitted,

WILLIAM B. DURANT,
GEORGE H. HOWARD,
STILLMAN F. KELLEY,
WELLINGTON FILLMORE,
EDMUND H. STEVENS,
} *Cambridge Water Board.*

REPORT OF THE WATER REGISTRAR

WATER REGISTRAR'S OFFICE,
CAMBRIDGE, December 5, 1899.

To the Cambridge Water Board:—

GENTLEMEN:—In compliance with the requirements of the City Ordinance, I present the thirty-fifth annual report of the operations of this department showing the receipts, expenditures and abatements, together with a statement of the number of water takers, etc., for the year ending November 30, 1899.

Amount of bills remaining unpaid, November 30, 1898:—

Water rates	$154 85
Meter rates	1,176 42
Supplies and repairs	1,270 24
Off and on	124 00
Seals	10 75
Maintenance account	79 15
Construction account	76 38

Amount of bills placed in hands of City Treasurer for collection from November 30, 1898 to November 30, 1899:—

Water rates	$222,746 88	
Meter rates	86,627 90	
Supplies and repairs	6,464 11	
Off and on	824 00	
Fines	20 00	
Rents	243 00	
Seals	148 75	
Maintenance account	2,426 97	
Construction account	1,360 00	
Total bills		$323,753 40

There has been collected:—

Water rates	$218,305 23
Meter rates	87,054 92
Supplies and repairs	6,592 26
Off and on	779 00
Fines	20 00
Rents	243 00
Seals	155 75
Maintenance account	1,830 09
Construction account	1,360 00

There has been abated: —

Water rates, off and on, and seals	$4,978 50	
Supplies and repairs	198 77	

There remains uncollected: —

Water rates	$277 55	
Meter rates	142 60	
Supplies and repairs	943 32	
Off and on	118 00	
Seals	2 00	
Maintenance account	676 03	
Construction account	76 38	
		$323,753 40

EXPENDITURES.

Construction account (general)	$33,364 00	
Construction account (Fresh Pond Land)	415 00	
Construction account (Fresh Pond Reservoir)	997 92	
Construction account (Hobbs Brook Reservoir)	11,874 17	
Maintenance account (general)	61,690 81	
Supply account	6,346 06	
		$114,687 96

ABATEMENTS.

Water rate bills to the amount of	$4,978 50	
Supply and repair bills to the amount of	198 77	
		$5,177 27

REFUNDS.

Water rates to the amount of	$2,791 15	
Which amount deducted from the receipts	305,360 15	
Leaves net receipts for water	$302,569 00	
Add off and on, fines, rents, seals, and Maintenance account	3,027 84	
Makes net receipts of rates, fines, etc.		$305,596 84

OFF AND ON.

Water has been shut off for non-payment of rates, or per order on account of vacancy, and seals have been applied to fixtures by request of owners, as follows: —

Water shut off in 1899	784
Supplies let on, shut off in 1899	628
Supplies let on, shut off in previous years	91
New supplies let on	280
Seal locks applied to fixtures in 1899	985
Seal locks removed, put on in 1899	520
Seal locks removed, put on in previous years	560

Statement of the yearly revenue received from water rates since the purchase of the works by the city:

From April 28, 1865, to December 1, 1865	$32,367 19
From December 1, 1865, to December 1, 1866	40,073 27
From December 1, 1866, to December 1, 1867	52,733 62
From December 1, 1867, to December 1, 1868	63,747 42
From December 1, 1868, to December 1, 1869	76,149 30
From December 1, 1869, to December 1, 1870	92,605 95
From December 1, 1870, to December 1, 1871	111,782 65
From December 1, 1871, to December 1, 1872	127,201 30
From December 1, 1872, to December 1, 1873	146,117 32
From December 1, 1873, to December 1, 1874	153,634 27
From December 1, 1874, to December 1, 1875	138,880 37
From December 1, 1875, to December 1, 1876	179,166 76
From December 1, 1876, to December 1, 1877	154,843 59
From December 1, 1877, to December 1, 1878	157,443 91
From December 1, 1878, to December 1, 1879	164,681 90
From December 1, 1879, to December 1, 1880	173,325 49
From December 1, 1880, to December 1, 1881	170,062 73
From December 1, 1881, to December 1, 1882	177,430 80
From December 1, 1882, to December 1, 1883	179,361 89
From December 1, 1883, to December 1, 1884	161,526 27
From December 1, 1884, to December 1, 1885	185,544 36
From December 1, 1885, to December 1, 1886	199,404 43
From December 1, 1886, to December 1, 1887	204,748 64
From December 1, 1887, to December 1, 1888	211,156 27
From December 1, 1888, to December 1, 1889	221,124 70
From December 1, 1889, to December 1, 1890	231,116 32
From December 1, 1890, to December 1, 1891	227,054 53
From December 1, 1891, to December 1, 1892	237,527 08
From December 1, 1892, to December 1, 1893	242,219 78
From December 1, 1893, to December 1, 1894	250,032 71
From December 1, 1894, to December 1, 1895	268,813 62
From December 1, 1895, to December 1, 1896	281,030 00
From December 1, 1896, to December 1, 1897	291,457 62
From December 1, 1897, to December 1, 1898	297,129 78
From December 1, 1898, to December 1, 1899	302,569 00

RECEIPTS.

The receipts for water as given in the above statement show a gain of $5,400 as compared with the collections for 1898. The normal gain is about $10,000 per annum, the stagnation in building operations being partially the cause of the loss, and the setting of meters during the year and consequent collection of but five-twelfths of the annual rates is responsible for the remainder of the loss.

All the annual water rate charges have been paid, the only charges remaining unpaid being for additional fixtures ($277.55) and for metered water ($142.60), in all, $420.15 out of a total of $310,000.

METERS.

Two years ago the Board decided to set meters to cover domestic consumption, at the option of the owners. About one hundred fifty persons availed themselves of the opportunity, the meters applied for covering apartment houses for three or more families almost exclusively, the owners evidently having reason to believe a saving could be effected from schedule rates. The results show a loss in revenue of about eleven per cent as compared with the collection at schedule rates.

Last spring the Board ordered about one hundred sixty meters set in the several business sections of the city. The revenue received from these meters for five months indicates an annual increase of twenty-eight and one-half per cent as compared with the former charges at schedule rates.

It seems to be a fair conclusion that the city would meet with no loss in revenue as the result of setting meters, and, unquestionably, the present excessive waste of water would be discontinued after the installation of meters.

Comparative Statement.

	1898		1899	
Construction Account (Hobbs Brook Reservoir).				
Received.				
From bonds issued	$187,000 00		$13,500 00	
From premium on bonds sold	5,055 00			
From sale of grass, feed, old material, etc	576 26		65 00	
		$192,631 26		$13,565 00
Expended.				
Construction of reservoir, land settlement, etc	$182,619 92		$11,874 17	
Balance of appropriation	10,011 34		1,690 83	
		$192,631 26		$13,565 00
Construction Account (Fresh Pond Land).				
Received.				
From bonds issued	$63,000 00		$500 00	
From premium on bonds sold	3,486 00			
		$66,486 00		$500 00
Expended				
Settlement for lands taken, etc	$62,288 57		$415 00	
Balance of appropriation	4,197 43		85 00	
		$66,486 00		$500 00
Construction Account (Fresh Pond Reservoir).				
Received				
From bonds issued		$8,000 00		$1,000 00
Expended.				
For work at Fresh Pond	$5,734 83		$997 92	
Balance of appropriation	2,265 17		2 08	
		$8,000 00		$1,000 00
Construction Account (General).				
Received.				
From bonds issued	$30,000 00		$33,500 00	
From premium on bonds	1,098 00			
From sale of pipe, fittings, etc	76 73		1,295 00	
		$31,174 73		$34,795 00
Expended.				
Sundry bills and pay rolls	$26,007 47		$33,364 00	
Balance of appropriation	5,167 26		1,431 00	
		$31,174 73		$34,795 00
Supply Account.				
Received.				
From pipe and labor on supplies		$6,036 03		$6,592 26
Expended.				
Sundry bills for stock and labor		$5,064 46		6,346 06
Excess of receipts		$971 57		$246 20
Maintenance Account.				
Received				
From "rates, fines, etc."	$298,336 54		$303,766 75	
From sale of grass, old material, etc	1,331 46		1,830 09	
Accrued interest on water bonds sold	455 97			
		$300,123 97		$305,596 84
Expended.				
Care and repairs	$76,111 76		$61,690 81	
Interest on water debt	124,854 00		130,674 00	
Sinking fund requirement	103,656 00		113,718 50	
		$304,621 76		$306,083 31
Deficit in receipts		$4,497 79		$486 47

COMPARATIVE STATEMENT.—*Continued.*

1898	Maintenance account, excess of expenditures.....	$4,497 79	
	Supply account, excess of receipts.....	971 57	
	Excess of total expenditures over total receipts.....		$3,526 22
1899	Maintenance account, excess of expenditures.....	$486 47	
	Supply account, excess of receipts.....	246 20	
	Excess of total expenditures over total receipts.....		$240 27

The excess of expenditures as shown in the statement for 1898, amounting to $3,526.22, has been paid to the City Treasurer from the balance due the water works on Construction account, and the amount should be restored to said Construction account when there are sufficient surplus receipts.

The excess of expenditures as shown in the statement for 1899, amounting to $240.27, has been advanced from the city treasury, and should be repaid when the surplus receipts will warrant it. These accounts, including the transactions of the past two years, stand as follows, viz. : —

Advanced from Construction account	$3,526 22	
Advanced from funds of the city	1,073 37	
To be paid from surplus receipts when opportunity offers		$4,599 59

In addition to the manufactories, business blocks, houses, etc., supplied through meters, water is supplied to 19,855 families, 863 stables, with 3,122 horses and 154 cows, 300 shops, 665 stores and offices, by the following fixtures, viz. : —

23,577 faucets.	68 urinals.
8,402 wash basins.	16 yard hydrants.
10,748 wash tubs.	4 fountains.
7,220 bath tubs.	26 tumbler washers.
327 slop closets.	2,072 hand hose.
19,706 pan closets.	13 motors.
4 hopper closets.	

Also,

945 fire hydrants (beside 19 on private premises).
8 fire reservoirs.
28 drinking fountains in public squares.
59 street watering standpipes.
4 public sanitaries.

The above schedule of fixtures does not include those in school-houses, engine houses, police stations, and other city buildings, or where the use of water is covered by meter.

The usual house-to-house inspection has been made with excellent results.

Respectfully submitted,

WALTER H. HARDING,

Registrar.

ANNUAL STATEMENT OF THE WATER REGISTRAR TO THE COMMITTEE ON ACCOUNTS, DECEMBER 1, 1899.

Water rates unpaid November 30, 1898	$1,331 27		
Supplies and repairs unpaid November 30, 1898,	1,270 24		
Off and on bills unpaid November 30, 1898	124 00		
Seals unpaid November 30, 1898	10 75		
Maintenance account unpaid November 30, 1898	79 15		
Construction account unpaid November 30, 1898	76 38		
		$2,891 79	
Bills placed in hands of City Treasurer for collection from December 1, 1898, to December 1, 1899:			
Water rates from annual ledgers	$213,016 50		
Water rates from fractional ledger	9,730 38		
Water rates from meter ledger	86,627 90		
Off and on water	824 00		
Fines	20 00		
Rent	243 00		
Seals	148 75		
Supply and repair bills	6,464 11		
Maintenance account	2,426 97		
Construction account	1,360 00		
		$320,861 61	
Total bills			$323,753 40
There has been collected: —			
Annual ledgers	$210,073 75		
Fractional ledger	8,231 48		
Meter ledger	87,054 92		
Off and on ledger	779 00		
Fines ledger	20 00		
Rent ledger	243 00		
Seals ledger	155 75		
Maintenance account	1,830 09		
Construction account	1,360 00		
Supply and repair account	6,592 26		
Total collections		$316,340 25	
There has been abated: —			
Water rates, off and on, and seals	$4,978 50		
Supply account	198 77		
		5,177 27	

There remains uncollected: —

Water rates		$420 15	
Supplies and repairs		943 32	
Off and on		118 00	
Seals		2 00	
Maintenance account		676 03	
Construction account		76 38	
			2,235 88
Total bills for collection			$323,753 40
Less abated		$5,177 27	
Less refunded		2,791 15	
Less unpaid		2,235 88	
			10,204 30
Net receipts			$313,549 10

Attest: WALTER H. HARDING,
Registrar.

CAMBRIDGE, December 14, 1899.

I have examined the accounts of the Water Registrar and find that they correspond in the amounts collected, abated, refunded and uncollected with the statement submitted by the City Treasurer and verified by the City Auditor.

STILLMAN F. KELLEY,
Committee on Accounts.

CITY OF CAMBRIDGE,
OFFICE OF CITY TREASURER,
December 1, 1899.

To the Cambridge Water Board:

GENTLEMEN:—I give you herewith a record of the transactions between the Water Office and the City Treasurer's Office during the year ending November 30, 1899.

Gross collections for account of Water Works, "Rates, fines, etc."	$311,536 40
Abatement certificates received and paid on "Water Rates"	4,978 50
Gross collections for account of Water Works, "Supply Account"	6,791 03
Abatement certificates received and paid on "Supply Account"	198 77
"Refund" certificates have been presented and paid to the amount of	2,791 15
Uncollected bills in my hands November 30, 1899, for account of "Maintenance, Construction and Water Rates," amount to	1,292 56
Uncollected bills in my hands November 30, 1899, for account of "Supplies, Repairs, etc.," amount to	943 32
Gross collections for account of Water Works, "Construction, General Account"	1,295 00
Gross collections for account of Water Works, "Construction, Hobbs Brook Account"	65 00
Gross collections for account of Water Works, "Maintenance, General Account"	1,830 09

Very respectfully,

WM. W. DALLINGER,
City Treasurer.

I have examined the above statement and find it correct.

HARRY T. UPHAM,
City Auditor.

REPORT OF THE SUPERINTENDENT OF WATER WORKS

CAMBRIDGE, December 1, 1899.

To the Honorable Water Board of the City of Cambridge:

GENTLEMEN:—Complying with the City Ordinance, I herewith submit the twenty-fifth annual report of the Superintendent, for the year ending November 30, 1899.

CONSUMPTION.

Total quantity of water pumped during the past year	2,882,570,430	gallons
Daily average water pumped during the past year	7,897,453	"
Quantity of water sold by meter	644,920,500	"
Quantity of water used for sprinkling streets	107,901,125	"
Quantity of water used for flushing sewers	1,250,000	"
Quantity of water used for cleaning sanitaries	7,500,000	"
Quantity of water used for drinking fountains	35,000,000	"
Total	796,571,625	"
Leaving for domestic purposes	2,085,998,805	"

Number of gallons daily for each inhabitant on the total amount pumped, 87.16.

Number of gallons daily for each inhabitant on the total amount used for domestic purposes, including water for private stables, hose, public buildings and fire purposes, 63.08.

COMPARATIVE STATEMENT OF TOTAL PUMPING DURING THE PAST TEN YEARS.

Date.	Total Yearly Pumping.	Increase or Decrease.	Average Daily Pumping.	Increase or Decrease.	Gallons to each inhabitant daily.
1890.....	1,638,550,512	112,111,507 increase.	4,489,179	307,155 increase.	62.35
1891.....	1,778,056,773	139,506,261 "	4,871,388	382,209 "	64.71
1892.....	1,961,362,760	183,305,987 "	5,358,915	487,527 "	66
1893.....	2,234,863,924	273,501,164 "	6,122 915	764,000 "	74.50
1894.....	2,127,878,627	106,985,297 decrease.	5,829,804	293,111 decrease.	69.19
1895.....	2,190,781,892	62,903,265 increase.	6,002,142	172,338 increase.	71.65
1896.....	2,413,506,557	222,724,665 "	6,594,280	592,138 "	75.90
1897. ...	2,441,340,196	27,833 639 "	6,688,603	94,323 "	76.46
1898.....	2,792,321,110	350,980,914 "	7,650,195	961,592 "	85.69
1899.....	2,882,570,430	90,249,320 "	7,897,453	247,258 "	87.16

COMPARATIVE STATEMENT OF DOMESTIC PUMPING DURING THE PAST TEN YEARS.

Date.	Domestic Yearly Pumping.	Increase or Decrease.	Average Daily Pumping.	Increase or Decrease.	Gallons to each inhabitant daily.
1890.....	1,217,062,012	61,140,305 increase.	3,334,416	167.507 increase.	46.08
1891.....	1,270,360,425	53,298,413 "	3,480,439	146,023 "	46.24
1892.....	1,426,400.135	156,039,710 "	3,897,268	416,829 "	48
1893.....	1,668,235,574	241,835,439 "	4,570,509	673,241 "	55.61
1894.....	1,547,943,977	120,291,597 decrease.	4,240,942	329,567 decrease.	50.34
1895. . .	1,530,152,817	17,791,160 "	4,192,199	48,743 "	50.04
1896.....	1,730,224,007	200,071,190 increase.	4,727,388	535,189 increase.	54.42
1897.....	1,740,357,346	10,133,339 "	4,768,102	40,714 "	54.50
1898.....	2,064,438,585	324,081,239 "	5,655,996	887,894 "	63.35
1899.....	2,085,998,805	21,560,220 "	5,715,070	59,074 "	63.08

Total amount of coal consumed (in pounds)	3,951,437
Daily average coal consumed (in pounds)	10,826
Coal consumed per million gallons pumped	1,370.83
Highest water elevation in Fresh Pond was on January 27	17.15
Lowest water elevation in Fresh Pond was on September 19	13.17
Average height of water in Fresh Pond	15.31
Highest water elevation in Stony Brook Reservoir was on March 6	82.25
Lowest water elevation in Stony Brook Reservoir was on July 8	75.30
Highest water elevation in Hobbs Brook Reservoir No. 1 was for the first seven months in the year	181
Lowest water elevation in Hobbs Brook Reservoir No. 1 was on October 31	179.48
Highest water elevation in Hobbs Brook Reservoir No. 2 was on March 20	181.27
Lowest water elevation in Hobbs Brook Reservoir No. 2 was on November 30	175.93
Total rainfall at Fresh Pond Pumping Station	37.28
Total rainfall at Stony Brook Reservoir	43.96
Total rainfall at Hobbs Brook Reservoir	34.22

TOTAL RAINFALL FOR THE PAST TEN YEARS.

Month	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
December	3.30	4.40	6.78	1.23	5.23	4.43	1.90	1.63	4.31	2
January	2.94	6.68	4.32	1.87	3.05	3.57	2.46	3.32	4.75	3.85
February.....	5.22	4.61	2.46	6.43	2.91	1.07	5.62	2.36	3.61	3.99
March.....	7.02	5.74	3.56	2.50	.84	2.68	4.37	2.66	2.03	5.94
April.....	4.83	2.72	.77	3.25	2.94	4.15	1.70	2.82	6.22	1.32
May.....	6.09	2.44	6.06	7.30	4.63	2.39	2.42	4.24	3.92	.77
June.	3.51	4.01	4.23	2.18	.81	2.76	2.33	5.16	1.82	3.17
July.....	2.77	3.06	2.53	2.26	2.88	3.28	2.65	4.68	4.50	3.12
August.....	3.48	3.68	6.11	5.95	1.63	4.71	2.45	5.06	7.34	3.21
September.....	4.05	2.73	1.84	1.76	2.40	1.83	6.29	3.22	1.78	4.63
October.....	9.31	5.10	2.15	3.77	5.19	10.16	3.10	.55	7.22	3.08
November.....	1.28	3.08	4.04	1.99	3.34	6.09	3.53	6.83	4.92	2.20
Total.....	53.80	48.25	44.85	40.49	35.85	47.12	38.82	42.53	52.42	37.23

FRESH POND AND SURROUNDINGS.

The work around the pond has consisted of the usual care of the roadways, walks, planted sections and grass plots, together with the care of the nursery.

About eight hundred dollars ($800.00) worth of stock has been sold from the nursery this year, owing to our having no appropriation for using the same on graded sections.

The riprapping around the pond, which was displaced by the ice last winter, has been replaced, and the fence repaired where needed.

The height of the pond has been at an average of 15.31 feet, and the water has been of its usual good quality.

The low water during the past fall has given opportunity for cleaning out a large amount of weed-growth in the shallow portions of the pond.

The buildings are in good condition, and will need very slight repairs the coming year.

FRESH POND RESERVOIR.

Date.	Lowest elevation during month.	Highest elevation during month.	Monthly Rainfall, inches.	Intake Gate.			
				8-inch Opening.		30-inch Opening.	
				Opened.		Opened.	Closed.
1898.							
Dec. 4	16.28		2	During entire month.	28 turns.	During entire month, 30 ins.	
Dec. 27		16.72					
1899.							
Jan. 25	16.14		3.85	During entire month.	From 1st to 26th, 28 turns. From 26th to 31st, 1½ turns.		January 25th.
Jan. 27		17.15					
Feb. 26	15.84		3.99	During entire month.	From 1st to 20th, 15½ turns. From 20th to 28th, 28 turns.		
Feb. 2		16.88					
Mar. 1	15.85		5.94	During entire month.	From 1st to 26th, 28 turns. From 26th to 31st, 9½ turns.		
Mar. 27		17.02					
Apr. 30	16.31		1.32	During entire month.	From 1st to 26th, 9½ turns. From 26th to 30th, 28 turns.		
Apr. 3		16.94					
May 30	16.12		.77	During entire month.	28 turns.	From 2d to 17th, 15 inches. From 17th to 31st, 30 inches.	
May 6		16.47					
June 30	15.07		3.17	During entire month.	28 turns.	During entire month, 30 ins.	
June 1		16.16					
July 30	13.86		3.12	During entire month.	28 turns.	During entire month, 30 ins.	
July 1		15.19					
Aug. 30	13.43		3.21	During entire month.	28 turns.	During entire month, 30 ins.	
Aug. 2		13.98					
Sept. 19	13.17		4.63	During entire month.	28 turns.	During entire month, 30 ins.	
Sept. 2		13.61					
Oct. 6	13.36		3.08	During entire month.	28 turns. Closed for ten hours, Oct. 31st	During entire month, 30 ins.	For ten hours, October 31st.
Oct. 30		13.64					
Nov. 2	13.65		2.20	During entire month.	28 turns.	During entire month, 30 ins.	
Nov. 29		14.24					
Total			37.28				

PUMPING STATION AND GROUNDS.

The grounds around the Pumping Station have received the usual care, but quite an amount of grading is necessary to put them in satisfactory condition.

The new engine and boilers have been in operation throughout the year, and have performed very satisfactorily.

A duty trial of the engine and boilers was made during June last, under the direction of Professor Ira N. Hollis, of the Lawrence Scientific School, and gave a duty of 128,817,000 ft. lbs. per one hundred pounds of New River coal, dry. The engine is doing better than this in its regular daily work.

A dwelling-house has been built for the Chief Engineer of the Pumping Station on the land belonging to the Water Works, situated east of Lake View Avenue, near the corner of Worthington Street.

HIGHLAND STREET RESERVOIR.

The reservoir remains in the same condition as last year, nothing having been done except the cutting of grass on the banks and the care of the walks.

PAYSON PARK RESERVOIR.

The grounds about the reservoir have received the necessary care, and the fence has been scraped and painted.

The level of the water has been maintained at an average of about sixteen (16) feet in depth, and the leakage, as shown by the weir on the under drain, has diminished.

PIPE YARD.

During the present year the removal of the shop from the City Hall, which has been under consideration for several years, has been effected.

Plans were prepared by Mr. C. Herbert McClare, architect, of Cambridge, for a two-story brick shop, to be located on the site of the old stable, and the contract was awarded to Messrs. E. W. Boynton & Co., of this City.

The old stable was sold at public auction and removed.

The tools have been removed from the old shop and set up, as has also the engine and vertical boiler, in the new shop.

A five-horsepower electric motor has been connected with the shafting so that power may be had at any time from the Cambridge Electric Light Company's lines when the boiler is not in use.

The meter testing room in the stable has been fitted with tank, scales and other necessary fixtures for the testing of all sized meters.

The dwelling house has been shingled and other repairs made, putting the whole in good condition.

PIPE BRIDGES.

The sixteen-inch (16) pipe across Brookline Bridge, which was damaged by the high tide last year, has been removed and stored at the pipe yard.

The building of the new bridge over the Fitchburg Railroad on Massachusetts Avenue has been delayed so that the twelve-inch (12) connection across the same has not been put in, but will be, in all probability, during the coming winter.

HIGH SERVICE.

No extension has been made on the high service system during the year.

Sixteen streets have been taken off, as the present pressure is sufficient to amply supply the elevations of the locations removed.

Following will be found a list of the streets that are at date supplied by the high service, November 30, 1899.

Agassiz Street.
Appleton Street, from Brattle Street to beyond Hutchinson Street.
Arlington Street.
Avon Hill Street.
Bates Street.
Bellevue Avenue.
Bellevue Avenue, west.
Brattle Street, from Appleton Street to Mason Street.
Brewster Street.
Buena Vista Park.
Centre Street.
Chatham Street.
Cleveland Street.
Dana Street, from Massachusetts Avenue to Broadway.
Dunster Street, from Massachusetts Avenue to Mt. Auburn Street.
Ellery Street, from Massachusetts Avenue to Broadway.
Garden Street, from Huron Avenue to Linnaean Street.
Garden Street, from Mason Street to Massachusetts Avenue.
Harvard Street, from Quincy Street to Dana Street.
Harvard College Campus.
Highland Street.
Hillside Avenue.
Holly Avenue.
Humboldt Street.
Huron Avenue, from Appleton Street to Raymond Street.
Lancaster Street.
Linnaean Street.
Mason Street.
Massachusetts Avenue, from Garden Street to Quincy Street.
Massachusetts Avenue, from near Trowbridge Street to Dana Street.
Mt. Pleasant Street.
Mt. Vernon Street.
Quincy Street, from Harvard Street to Broadway.
Raymond Street, from Linnaean Street to Walden Street.
Reservoir Street, from Highland Street.
Riedesel Avenue.
Spark Street, from Huron Avenue to Brattle Street.
Upland Road, from Richdale Avenue to Huron Avenue.
Vassal Lane, from Huron Avenue.
Vincent Street.
Walnut Street.
Ware Street.
Washington Avenue.

LIST OF CHECK-VALVES IN USE.

Appleton Street at Hutchinson Street.
Arlington Street at Massachusetts Avenue.
Cambridge Street on line of six-inch pipe crossing College Ground.
Garden Street and Linnaean Street.
Mt. Vernon Street, one hundred feet west from Massachusetts Avenue.
Prescott Street at Massachusetts Avenue.
Vincent Street at Walden Street.

LEAKAGE.

There have been twenty-four hundred sixty-two (2,462) leaks reported this year.

It will be noticeable that this number is the largest annual amount ever reported, — it exceeding the account of last year (1898) by ten hundred fifty-four (1,054).

This increase is the result of a special and very careful inspection made early in the season for the detection of leaks, in order to diminish the consumption of water, which had been considerably increased by our additional pressure.

In cases of defective mains or supplies in streets, these leaks have been repaired by the department, and on the premises the occupants or owners have made the necessary repairs.

The leaks were discovered as follows:

Two on three-inch main.
Three on four-inch main.
Five on six-inch main.
One on eight-inch main.
Two on twenty-four-inch main.
One on meters.
Three on hydrants.
One hundred twenty-three on supplies in streets.
Four hundred thirty-eight on faucets.
Seventeen hundred forty on water-closets.
Twenty-four on stop and waste valves.
One hundred twenty on pipes, etc., on premises.

Total, 2,462.

A number of leaks was caused in Inman, Pleasant and River Streets while the work of laying the new gas mains for the Massachusetts Pipe Line Gas Company was being carried on. The cost of the necessary repairs was paid by the Company.

TABLE SHOWING A GAIN OR LOSS IN TOTAL CONSUMPTION FOR THE YEAR 1899 OVER THE YEAR 1898.

	Total Consumption, 1899.	Total Consumption, 1898.	Increase or Decrease, + or —.
December	250,320,840	210,803 340	+ 39,517,500
January	265,448,480	235,138,540	+ 30,309,940
February	269,707,680	221,925,900	+ 47,781,780
March	233,806,320	228,800,475	+ 5,005,845
April	211,354,880	212,361,600	— 1,006,720
May	239,712,880	215,073,060	+ 24,639,820
June	259,134,040	241,610,160	+ 17,523,880
July	278,324,200	250.865,560	+ 27,458,640
August	242,280,280	265,579,600	— 23,299,320
September	226,769,400	229,313,920	— 2,544,520
October	210,751,390	260,146,275	— 49,394,885
November	194,960,040	220,702,680	— 25,742,640
Total	2,882,570,430	2.792,321,110	+ 90,249,320

MAIN PIPE.

Main pipes have been laid in the following streets: 281 feet of 6-inch in Belmont Street (extension); 185 feet of 6-inch in Bent Street, from First Street; 132 feet of 6-inch in Bird Street, from Belmont Street; 142 feet of 1¼-inch in Blair Place, from Bolton Street; 344 feet of 6-inch in Bolton Street, for the Street Department, and 521 feet of 6-inch from Sherman Street; 358 feet of 6-inch in Camelia Avenue, from Cambridge Street; 140 feet of 6-inch in Chatham Street, from Dana Street; 114 feet of 1¼-inch in DeWolf Place; 1102 feet of 6-inch in the Esplanade; 191 feet of 6-inch in Fairview Avenue; 1463 feet of 6-inch in Franklin Street, from Magazine Street to Sidney Street, in place of 4-inch removed; 506 feet of 6-inch in Garden Street, from Concord Avenue to Waterhouse Street, and 351 feet of 6-inch from Waterhouse Street to Mason Street in place of 6-inch removed; 182 feet of 6-inch in Hardwick Street, from Berkshire Street; 214 feet of 6-inch in Herbert Street, from Richdale Avenue to Cambridge Terrace; 543 feet of 4-inch in Jordan Place, from Broadway; 392 feet of 6-inch in Lawn Court, from May Street; 428 feet of 6-inch in Magazine Street, from Glenwood Street, and 460 feet of 1¼-inch at Captain's Island; 377 feet of 8-inch in Massachusetts Avenue, from Albany Street to Vassar Street; 975 feet of 6-inch, from Chauncy Street to Sacramento Street, in place of 6-inch removed; 2439 feet of 12 inch, from Inman Street to Putnam Avenue, in place of 8-inch removed; 129 feet of 10-inch from Putnam Square to beyond Trowbridge Street, in place of 10-inch removed; 793 feet of 6-inch from Sacramento Street to Linnaean Street, in place of 6-in removed, and 737 feet of 6-inch from Waterhouse Street to Chauncy Street, in place of 6-inch removed;

140 feet of 6-inch in May Street, from the extension from Vineyard Street, and 280 feet of 6-inch to Lawn Street; 75 feet of 6-inch in Orrin Street; 86 feet of 1¼-inch in Oxford Avenue, from Lawn Street, and 263 feet of 6-inch from Lawn Street to Fairview Street; 554 feet of 6-inch in Pacific Street, from Brookline Street to Sidney Street; 554 feet of 6-inch in Pilgrim Street, from Brookline Street to Sidney Street, in place of 4-inch removed; 107 feet of 1¼-inch in Porter Circle; 169½ feet of 1½-inch in Porter Park; 28½ feet of 1¼-inch in Porter Road; 160 feet of 4-inch in Prentiss Place, from Massachusetts Avenue; 454 feet of 6-inch in Prospect Street, from Hampshire Street to Cambridge Street, in place of 4-inch removed, and 241 feet of 6-inch from Harvard Street, north, in place of 4-inch removed; 244 feet of 6-inch in Railroad Street, from Middlesex Street; 155 feet of 6-inch in Seckle Street, from Winsor Street; 333 feet of 6-inch in Seven Pines Avenue to Yorktown Street; 470½ feet of 12-inch in Sidney Street, from Auburn Street to Pacific Street, in place of 4-inch removed; 512 feet of 6-inch in St. Paul Street, from Prospect Street; 293½ feet of 6-inch in Traymore Street, from Eustis Street to Harris Street; 101½ feet of 6-inch in Vassar Street, from Massachusetts Avenue; 662 feet of 6-inch in Waterhouse Street, from Massachusetts Avenue to Garden Street, in place of 6-inch removed; 155 feet of 6-inch in Woodbridge Street, from Massachusetts Avenue; 127 feet of 1¼-inch in Yorktown Court, from Yorktown Street; 111 feet of 6-inch in Yorktown Street, to Yorktown Court.

Total length of cast iron pipe laid during the year was 19,245 feet, or 3.645 miles; renewals, 1.86 miles; extensions, 1.785 miles; weight of metal, 349.413 tons.

The sizes, length and weight of main cast-iron pipe laid during the year are as follows:

Size.	Length in Feet.	Weight in Tons.
12 inch	2,936½	114.05
10-inch	163	5.748
8-inch	437	9.364
6-inch	14,892½	214.178
4-inch	716	6 073

In laying its new pipe through Inman Street the Massachusetts Pipe Line Gas Company has required the location from Summer Street to Hampshire Street, formerly occupied by our 6-inch main, which was laid in 1892.

The Company furnished us with the required amount of 6-inch pipe, which we have laid, at its expense, on the west side of the street. The old 6-inch has been removed.

In Springfield Street, at Cambridge Street, the 6-inch pipe has been relocated and renewed, and in Auburn, Fairmont and Rockwell Streets the main pipes have been offset for the accommodation of this Gas Company, it paying all cost of material furnished and labor performed.

The water has been shut off from the 6-inch main in Willis Court.

The Metropolitan Park Commission has taken the land on the south side of Mt. Auburn Street bordering on Charles River, including this Willis Court, which eventually will be discontinued.

An air-valve has been set in the 20-inch main pipe in Broadway, at Prospect Street.

SUPPLIES.

Total number of supplies at date, November 30, 1899, fourteen thousand forty-nine (14,049).

There have been three hundred eight (308) additional supplies laid during the year.

One hundred fifty (150) old supplies have been furnished with sidewalk cocks and service boxes.

One hundred forty-nine (149) service boxes have been set on the small supplies, where the Water Board has placed meters during the year.

Three hundred thirty-two (332) old supplies have been renewed.

As the work on renewal of mains in the streets was being done, the supplies following were renewed at the expense of the Water Board in the streets; any work on the premises was charged to the owners of the property.

In Fairview Avenue	1	In Oxford Avenue	1
In Franklin Street	29	In Pacific Street	3
In Garden Street	3	In Pearl Street	44
In Jordan Place	3	In Pilgrim Street	7
In Massachusetts Avenue, from Inman Street to Putnam Ave.	31	In Portland Street	8
In Massachuseets Avenue, from Linnaean Street to Waterhouse Street	18	In Prospect Street	52
		In Sidney Street	6
		In Waterhouse Street	2

Total number of supplies renewed on this work, two hundred eight (208).

The number of supplies renewed on usual maintenance work was one hundred thirty-two (132); of these eighteen were enlarged.

Anticipating the future condition of Pearl, Prospect and Portland Streets, which have been paved and the surface of which is not to be disturbed, all the supplies have been located, ninety-six (96) renewed and twenty (20) new one-inch supplies laid to the vacant lots.

In Pearl Street forty-four (44) have been renewed and three (3) new

supplies laid; in Portland Street eight (8) new supplies have been laid; and in Prospect Street fifty-two (52) have been renewed and nine (9) new supplies laid.

These supplies have been included in the number of new and renewed supplies before mentioned.

In Inman, Pleasant and River Streets, the supplies have been offset where they would have interfered with the location of the pipes laid by the Massachusetts Pipe Line Gas Company; the expense was paid for by the Company.

In May Street and Oxford Avenue, the old supplies have been connected to the new main pipe.

The New England Telephone and Telegraph Company has required considerable work in the line of offsetting supplies for the accommodation of its conduit; the work has been done at its expense.

A thorough examination of supply service boxes has been made in all parts of the City; they have been lowered or raised to grade as the conditions required.

DRINKING FOUNTAINS.

There are twenty-eight (28) drinking fountains in use in the City, four (4) of which are ice-water drinking fountains of Jenks make.

With the exception of one ice-water drinking fountain, the locations are the same as those of last year.

The ice-water drinking fountain at the corner of Cambridge and Third Streets has been moved to a location below Third Street on the same side of Cambridge Street, in front of the new Registry of Deeds building.

This change was made in response to a petition received from the congregation of the Methodist Church, in front of which the fountain was formerly located; the crowd assembled at the drinking fountain having disturbed the congregation during service.

These ice water drinking fountains continue to be appreciated additions, and the constant use has satisfactorily proved that the locations where they are placed are convenient for the general public.

The fountains in Brattle, Lechmere, Mechanic's and Porter's Squares and at Broadway Park have received needed repairs.

STREET WATERING STANDPIPES.

There has been no addition to the street watering standpipes during the year.

One standpipe on Prison Point Street, broken by a team, has been repaired.

GATES.

Forty-seven gates have been set in connection with extensions and renewals as follows:

Three (3) 4-inch; thirty-three (33) 6-inch; three (3) 8-inch; two (2) 10-inch; and six (6) 12-inch.

Six (6) gates have been set on supplies; four (4) 4-inch; one (1) 6-inch; and one (1) 8-inch.

In Walden Street, corner of Mt. Pleasant Street, the 6-inch gate has been removed, and a new 6-inch set in its location.

One 6-inch gate has been set on the hydrant branch at the corner of Sidney Street and Massachusetts Avenue.

One 6-inch gate has been set in Irving and Casson's on Otis Street.

One 4-inch gate has been set in Madison Street, corner of Concord Avenue, in place of old one broken.

All the gates in the city have been inspected and their locations marked.

BOXES.

Thirty-nine (39) gate boxes have been set in place of old ones removed; sixteen (16) wooden, two (2) hydrant, and twenty-one (21) iron.

Nineteen (19) boxes have been set on the work of extension and renewal; thirteen (13) wooden and six (6) iron.

Eighty (80) boxes have been placed on meters set during the year; forty (40) wooden and forty (40) iron.

Total number of boxes set, one hundred thirty-eight (138).

During the year the Street Department has found it necessary to change the grades in many of the streets, and at its request, the gate boxes have been raised or lowered as occasion required.

The expense of this work was, as usual, cared for by this department.

METERS.

The total number now in use is six hundred nineteen (619).

Ball & Fitts	4	Nash	13
Buffalo	1	Thomson	9
Crown	44	Trident	177
Empire	2	Union Duplex	1
Frost	2	Union Rotary	46
Gem	1	Worthington	147
Hersey	172		

The largest annual number of meters set, *i.e.*, one hundred seventy-two (172), has been added to the list this year.

Early in the spring the Water Board voted to place meters on buildings in the business sections of the city, and as it seemed advisable, in response to petitions, in order to reduce the waste and consumption of water. This increase in the yearly number of meters set has been the result of this decision of the Water Board.

All the meters set this year have been boxed and packed.

HYDRANTS.

Twenty-four additional hydrants have been set during the year.

Following are the kinds and makes of post hydrants set in new locations or in place of old flush of post hydrants removed: In Bigelow Street, Chapman set (flush removed); in Bolton Street, in Street Department yard, Chapman set; in Broadway, near Pioneer Avenue, Chapman set; in Fifth Street, corner of Vine Street, Chapman set (old flush removed from corner of Vine and Fifth Streets); in Franklin Street, at Blanche Street, Chapman set; in Franklin Street, midway between Brookline and Sidney Streets, two Chapman set (one Coffin removed); in Garden Street, at Donnell Street, Chapman set (flush removed at corner of Donnell and Garden Streets); in Glenwood Avenue, at Magazine Street, Coffin set (Coffin removed); in Gore Street, at No. 128, Chapman set (Boston removed); in Harris Street, opposite Traymore Street, Coffin set; in Holworthy Street, Chapman set (Boston removed); in Hudson Street, opposite Wright Street, Chapman set; in Inman Street, near Austin Street, Chapman set (flush removed); in Massachusetts Avenue, at Albany Street, Chapman set; in Massachusetts Avenue, at Bay Street, Chapman set (flush removed from opposite side of Avenue); in Massachusetts Avenue, at Bigelow Street, Chapman set (flush removed); in Massachusetts Avenue, at Chauncy Street, Chapman set (flush removed); in Massachusetts Avenue, at Ellery Street, Chapman set (flush removed from corner of Ellery Street and Massachusetts Avenue); in Massachusetts Avenue, at Lee Street, Chapman set (flush removed); in Massachusetts Avenue, at Trowbridge Street, Holyoke set; in Massachusetts Avenue, near Waterhouse Street, Chapman set; in May Street, at Vineyard Street, Chapman set; in Oxford Avenue, at Lawn Street, Chapman set; in Pacific Street, near Sidney Street, Chapman set; in Pilgrim Street, midway between Brookline and Sidney Streets, Chapman set; in Potter Street, at Fifth Street, Chapman set; in River Street, near Kinnaird Street, Chapman set (Holyoke removed); in Seven Pines Avenue, at Yorktown Street, Chapman set; in Sidney Street, at Massachusetts Avenue, Coffin set (Boston removed); in Sidney Street, at Pacific Street, Chapman set; in Springfield Street, at Cambridge Street, Chapman set

(old flush removed from Cambridge, corner of Springfield Street); in Saint Paul Street, at angle, Perkins set; in Third Street, near Potter Street, Chapman set; in Winsor Street, near Cambridge Street, Chapman set; in Winter Street, at Fourth Street, Chapman set (Perkins removed); in Woodbridge Street, near Massachusetts Avenue, Chapman set; on premises of Middlesex County, House of Correction, two (2) Chapman set.

Three flush hydrants have been set in new locations, i. e., two on the Park Esplanade near Harvard Bridge, and one on Magazine Street at Leverett Street; these are to be used by the Park Department.

One flush hydrant has been set in place of old flush removed at the corner of Reed and Harvey Streets.

There have been set in new locations nineteen Chapman hydrants, one Coffin hydrant, one Holyoke hydrant, one Perkins hydrant, and three flush hydrants.

The following have been set in place of hydrants removed; ten Chapman in place of flush, two in place of Boston, one in place of Coffin, one in place of Holyoke, and one in place of Perkins; one Coffin in place of Boston, and one in place of Coffin; one flush in place of flush.

One Chapman hydrant has been removed.

In the following locations the hydrants have been repaired; Chilton Street, River Street opposite Fairmont Street, and Bridge Street at East Street.

For the accommodation of the Street Department the hydrants have been relocated at Huron Avenue, corner of Concord Avenue; in Norris Street; in Kirkland Street, near Oxford Street, and in Richdale Avenue.

In Willis Court the Chapman hydrant has been removed; this court is to be closed.

In Richdale Avenue two Chapman hydrants have been relocated, the laying out of Herbert Street necessitating this change.

The total number and kinds of hydrants in use in the City are as follows:

Boston	162
Chapman	428
Coffin	42
Flush	132
Holyoke	86
Perkins	95
Total	945

STONY BROOK.

About twenty-five hundred (2500) feet of wire fencing has been built near the upper end of the basin to keep the cattle from the brook.

The drainage from the Washburn and Coburn Places has been cared for by the construction of cesspools.

Satisfactory arrangements were made with the owners of the new hotel, built the past season in Weston, to dispose of the drainage so as to be of no possible danger to our water supply.

The Sargent Place, lately purchased by the City, has been thoroughly cleaned; the buildings and all rubbish about the place have been burned. There will be needed considerable fencing about this place the coming year.

TABLE SHOWING THE DAILY AVERAGE NUMBER OF GALLONS, BY THE MONTH, FLOWING OVER THE WASTE WAY AT STONY BROOK.

	Gallons.	Number of Days.		Gallons.	Number of Days.
December, 1898.....	37,225,806	31	June, 1899.....	No overflow.	—
January, 1899.....	40,670,968	31	July, 1899.....	" "	—
February, 1899.....	22,017,857	28	August, 1899....	" "	—
March, 1899.....	78,109,678	31	September, 1899.....	" "	—
April, 1899. ...	47,396,666	30	October 1899.....	" "	—
May, 1899.....	3,061,290	24	November, 1899.....	" "	—

Total quantity wasted . . . . . 6,969,500,000 gallons.
Total number of days in which water wasted 175

STONY BROOK PIPE LINE.

The need of keeping this line in constant use the past year has prevented the making of the examination recommended in our last report.

The air-valves, gates and blow-offs have received the usual inspection.

Several gate-boxes have been changed to suit the change in grade of streets and the location of car-tracks.

I renew the recommendation of last year that, as soon as the main can be spared, a thorough examination of it be made.

STONY BROOK.				HOBBS BROOK.										
				LINCOLN STREET BASIN.			WINTER STREET BASIN.				REMARKS.			
Date.	Lowest elevation reached.	Highest elevation reached.	Rainfall.	Date.	Lowest elevation reached	Highest elevation reached.	Date.	Lowest elevation reached.	Highest elevation reached.	Rainfall.	Opened gate.	Closed gate.	Removed flash-boards.	Put on flash-boards.
Dec. 6, 1898	.....	82.05	.....	Dec. 1898	....	181	Dec. 8, 1898	.....	181.15	.....	....	....	.....	.....
Dec. 29, 1898	81.30	.....	3.10	.....	181	....	Dec. 31, 1898	180.85	.....	1.83	.....	.....	.....	.....
Jan. 25, 1899	.....	82.02	... ..	Jan. 1899	.....	181	Jan. 26, 1899	....	181.05	.....	.....	....	.....	.....
Jan. 2, 1899	81.38	.....	4.43	....	181	.....	Jan. 17, 1899	180.87	.....	2.40	.....	.....	.....	.....
Feb. 28, 1899	.....	81.65	.....	Feb. 1899	.....	181	Feb. 28, 1899	... .	180.87	.....	.....	.....	.....	.....
Feb. 14, 1899	81.29	.....	4.83	.....	181	.....	Feb 16, 1899	180.75	... .	4.52	.....	.....	.....	.....
Mar. 6, 1899	.....	82.25	.....	Mar. 1899	....	181	Mar. 20, 1899	.....	181.27	.....	.....	.....	.....	.....
Mar. 4, 1899	81.52	.....	8.78	....	181	.....	Mar. 1, 1899	180.87	.....	4.77	.....	.....	.....	.....
Apr. 9, 1899	....	81.96	.....	Apr. 1899	.....	181	Apr. 10, 1899	.....	181.15	.....	.....	.....	....	Apr. 28th
Apr. 30, 1899	81.24	.....	1.49	....	181	.. ..	Apr. 28, 1899	180.80	.....	1.30	.....	....	.....	.....
May 2, 1899	....	81.27	... ..	May 1899	.....	181	May 22, 1899	....	181.14	.....	.....	.....	.....	.....
May 31, 1899	80.40	.. ..	1.06	....	181	.....	May 1, 1899	180.90	.....	1.34	.....	.....	.....	.....
June 1, 1899	.....	80.27	.....	June 1899	.....	181	June 1, 1899	.....	181.10	.....	.....	.....	June 28th	. .....
June 29, 1899	75.61	.....	3.10	.....	181	.....	June 30, 1899	180.95	.....	3.15	.....	.....	.....	.....
July 31, 1899	.....	77.62	.....	July 1, 1899	.....	180.90	July 1, 1899	.....	180.90	.....	.....	.....	July 5, 6, 13,	.....
July 8, 1899	75.30	.....	3.03	July 25, 1899	180.34	.. ..	July 31, 1899	179.53	.....	3.23	.. ..	.....	22, 24, 24, 31	.....
Aug. 13, 1899	.....	78.20	.....	Aug. 1, 1899	.....	180 38	Aug. 1, 1899	.....	179.47	.....	Aug. 18th	.....	Aug. 1,7, 10	.....
Aug. 22, 1899	77.40	.....	3.66	Aug. 22, 1899	179.95	.....	Aug. 31, 1899	178.15	.....	3.17	....	.....	.....	.....
Sept. 22, 1899	.....	78.40	.....	Sept. 2, 1899	.....	180	Sept. 1, 1899	.....	178.10	.....	.....	.....	.....	.....
Sept. 17, 1899	77.82	....	5.25	Sept. 19, 1899	179.50	.....	Sept. 30, 1899	177.15	.....	3.42	.....	.....	.....	.....
Oct. 30, 1899	.....	78.08	.....	Oct. 1, 1899	.....	179.67	Oct. 1, 1899	.....	177.13	.....	.....	.....	.....	.. ..
Oct. 4, 1899	77.82	.....	1.79	Oct. 31, 1899	179.48	.....	Oct. 31, 1899	176.07	.....	1.86	.. ..	....	.....	.....
Nov. 14, 1899	.....	78.40	.....	Nov. 19, 1899	. .....	180.64	Nov. 4, 1899	.....	176.17	.....	Nov. 8th	Nov. 5th	.....	.....
Nov. 11, 1899	77.88	.....	3.44	Nov. 1, 1899	179.66	.....	Nov. 30, 1899	175.93	.....	3.23	Nov. 19th	Nov. 15th	.....	. .. .
Total.....			43.96							34.22				

HOBBS BROOK.

The draught of the past season has been of such duration as to require the drawing down of this basin several feet.

The first flash boards were removed from Winter Street Dam June 28th, and the greater part of the supply for the city has been from this source, up to the present time.

The basin at present is about five (5) feet below high water.

The meadows near the old ice houses have been ditched and the dams cut away, the lease of the ice privilege having been cancelled.

The water now flows directly from the meadows to the basin, and is not discolored by remaining in contact with the muck longer than is absolutely necessary.

The brook leading from Winter Street Dam to Stony Brook has been thoroughly cleared of stone and other obstructions, and that portion immediately below Winter street has been walled in on both sides.

A large amount of brush and dead wood has been cut around the borders of the basin and along the fences.

The standing grass not needed by the department has been sold.

The house occupied by the keeper should be painted the coming season.

RECAPITULATION.

NEW SUPPLIES.

	8 Inch	6 Inch	4 Inch	3 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	Total.
Length, in feet, of pipe	40	33½	117	16	147	669	1,229	3,747	7,488	13,486½
Number of supplies	1	....	3	....	4	8	7	77	198	298
Number of stops and waste valves	....	....	....	1	3	7	6	63	199	279
Number of screw cocks	....	....	....	....	2	7	7	109	200	325
Number of sidewalk cocks	....	....	....	....	....	....	7	65	219	291
Number of service boxes	....	....	....	....	....	....	....	....	....	268
Number of gates	1	1	4	....	....	....	....	....	....	6
Number of gate boxes	....	....	....	....	....	....	....	....	....	6
Number of wooden boxes	....	....	....	....	....	....	....	....	....	13

MAIN PIPE.

	12 Inch	10 Inch	8 Inch	6 Inch	4 Inch	1½ Inch	1¼ Inch	Total.
Length, in feet, of cast-iron pipe (extensions)	24	34	416	8,627½	716	169½	1,064½	11,051½
Length, in feet, of cast-iron pipe (renewals)	2,912½	129	21	6,365	.....	.....	.....	9,427½
Total length, in feet, of cast-iron pipe	2,936½	163	437	14,992½	716	169½	1,064½	20,479
Number of gates	6	2	3	33	3	.....	.....	47
Number of hydrants	.....	.....	.....	.....	.....	.....	.....	34

COMPARATIVE TRENCHING FOR THE PAST TEN YEARS.

	Extensions.	Renewals.	Supplies.	Total feet.	Miles.
1890.....	11,713½	1,929	15,525	29,167½	5.52
1891.....	9,858½	2,958	17,864	30,680½	5.81
1892.....	16,784½	13,628	16,013	46,425½	8.79
1893.....	18,380½	11,008	14,233½	43,622	8.26
1894.....	13,673	17,481½	17,211	48,365½	9.16
1895.....	11,083	15,638½	22,266	48,987½	9.27
1896.....	17,621	26,043	17,361	61,025	11.55
1897.....	11,268	36,967½	16,121½	64,357	12.19
1898.....	11,045½	25,397	12,186	48,628½	9.21
1899.....	11,051½	9,427½	13,486½	33,965½	6.43

Following will be found the report of the Chief Engineer of the Pumping Station.

All of which is respectfully submitted,

E. C. BROOKS,

Superintendent.

REPORT OF THE PUMPING ENGINEER

December 1, 1899.

To the Honorable, the Water Board of the City of Cambridge.

Gentlemen : — The machinery at the Pumping Station is in first-class condition. No. 1 Worthington engine was run sixty-four hours and thirty minutes, No. 2 Worthington sixty-six hours and forty minutes, and No. 4 Blake twenty-two hours and thirty minutes, during October, as they had not been started before during the year. The Leavitt engine has pumped all the water used by the city the past year, and still continues to run without trouble or expense.

I would recommend skin-coating Nos. 1 and 2 boilers with magnesia and painting the same, also the steam piping and iron work in the fire room.

The Winslow electric gauge for showing the height of water in the reservoir was started December 4, 1898, working very satisfactorily to this date.

Respectfully submitted,

E. I. HARRIS,
Chief Engineer.

Engine Record, Pond Levels and Rainfall.

Date.	Low Service Engines.						High Service Engine.			Engine No. 7.			Total Water Pumped.	Daily Average Water Pumped.	Total Coal Consumed.	Daily Average Coal Consumed.	Average Height of Pond.	Rainfall.
	Engine No. 1.			Engine No. 2.														
	Running Time.		Water Pumped.	Running Time.		Water Pumped.	Running Time.		Water Pumped.	Running Time.		Water Pumped.						
1898.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Gallons.	Gallons.	Lbs.	Lbs.	Feet.	In.
December..	—	—	—	—	—	—	—	—	—	294	45	250,320,840	250,320,840	8,074,866	346,700	11,184	16.55	2.
1899.																		
January....	—	—	—	—	—	—	—	—	—	302	45	265,448,480	265,448,480	8,562,854	350,450	11,305	16.79	3.85
February...	—	—	—	—	—	—	—	—	—	314	10	269,707,680	269,707,680	9,632,417	359,400	12,836	16.30	3.99
March.....	—	—	—	—	—	—	—	—	—	275	—	233,806,320	233 806,320	7,542,139	316,777	10,219	16.49	5.94
April.....	—	—	—	—	—	—	—	—	—	245	30	211,354,880	211,354,880	7,045,163	295,200	9,840	16.65	1.32
May.....	—	—	—	—	—	—	—	—	—	275	05	239,712,880	239,712,880	7,732,673	315,600	10,181	16.33	.77
June.....	—	—	—	—	—	—	—	—	—	299	21	259,134,040	259,134,040	8,637,801	341,610	11,387	15.55	3.17
July.....	—	—	—	—	—	—	—	—	—	321	55	278,324,200	278,324,200	8,978,200	350,000	11,290	14.47	3.12
August.....	—	—	--	—	—	—	—	—	—	277	40	242,280,280	242,280,280	7,815,493	319,500	10,307	13.69	3.21
September..	—	—	—	—	—	—	—	—	—	260	40	226,769,400	226,769,400	7,558,980	313,100	10,437	13.42	4.63
October.....	64	30	17,486,400	66	40	17,497,800	22	30	1,494,630	200	20	174,272,560	210,751,390	6,798,432	349,550	11,276	13.49	3.08
November..	—	—	—	—	—	—	--	—	—	223	05	194,960,040	194,960,040	6,498,668	293,550	9,785	13.95	2.20
Total.....	64	30	17,486,400	66	40	17,497,800	22	30	1,494,630	3,290	16	2,846,091,600	2,882,570,430	—	3,951,437	—	—	37.28
Daily Av'ge	—	—	—	—	—	—	—	—	—	9	—	7,797,511	7,897,453	—	10,826	—	15.31	—

REPORT OF THE CITY MESSENGER

OFFICE OF THE CITY MESSENGER, December 1, 1899.

To the Honorable, the City Council: —

GENTLEMEN: — In compliance with the Ordinance relating to the purchase and delivery of stationery, the City Messenger has the honor to submit his annual report: —

Stock of stationery on hand December 1, 1898	$336 75
Purchased during the year	1,149 75
	$1,486 50

Delivered to heads of departments as follows: —

Street Department	$ 91 42
City Clerk Department	90 85
Engineering Department	35 52
Clerk of Committees Department	114 42
Auditing Department	55 97
City Messenger Department	112 29
City Treasurer Department	33 15
Police Department	72 45
Lamp Department	8 03
Assessors' Department	98 15
Fire Department	6 00
Inspector of Milk Department	14 30
Superintendent Public Buildings Department	25 20
Soldiers' Aid Department	7 88
Inspector of Wires Department	19 73
Law Department	35 32
Executive Department	74 90
Election Expenses	55 02
Sealer of Weights and Measures	6 15
Registrars of Voters	4 69
Park Department	50 47
Sewer Department	7 06
Board of Health	14 20
Cambridge Public Library	24 00
Stock of stationery on hand December 1, 1899	429 33
	$1,486 50

Respectfully submitted,

FRANCIS L. PRATT,

City Messenger.

REPORT OF THE COMMITTEE ON SOLDIERS' AID

The Committee on Soldiers' Aid submits to the City Council its report for the year ending November 30, 1899: —

The amount paid as regular State Aid was	$13,808 00
The amount paid to indigent soldiers and sailors was	1,408 00
The amount paid as soldiers' relief was	7,454 00
The amount paid for the burial of deceased indigent or friendless soldiers or sailors was	455 00
The amount paid to the clerk and agent employed in the examination of settlements, etc., was	900 00
Printing and stationery	89 88
Aid by cities and towns	92 50
Ambulance fee	6 00
Board and care of sundry persons	1,092 39
Car tickets	15 00
Fuel	96 00
Sundry supplies	96 00
Typewriting	12 00
Total	$25,524 77

The amount received from the Commonwealth was	$15,198 93
The amount received from other towns and cities was	92 29
For sundry authorized payments which were not paid	220 36
Total	$15,511 58

There are now upon the State Aid list 282 persons, and upon the list of indigent soldiers and sailors 12. The number of persons upon the soldiers' relief list is 99.

All of which is respectfully submitted,

JOHN J. AHERN,
CLEMENT G. MORGAN,
HANS L. CARSTEIN,
EBEN H. GOOGINS,
GEORGE E. SAUNDERS,
Committee on Soldiers' Aid.

REPORT OF THE SUPERINTENDENT OF PUBLIC BUILDINGS

OFFICE OF THE SUPERINTENDENT OF PUBLIC BUILDINGS,
CITY HALL, CAMBRIDGE, December 1, 1899.

To the Honorable, the City Council of the City of Cambridge:—

GENTLEMEN:—In compliance with the requirements of Section 2, Chapter 13, of the City Ordinances, I have the honor as Superintendent of Public Buildings to submit the fourteenth annual report of this department.

I have endeavored to give in this report a complete summary of the building operations in the City, together with a detailed account of the work done on the various City buildings.

The building permits issued the past year exceed those of the previous year, and it is worthy of notice to compare the class of buildings which have been erected the past season with those of former years. A constant improvement is being made, not only from increased accommodations, but from an architectural point. This fact becomes apparent to one who will carefully note the various stone and brick buildings erected on Massachusetts Avenue and other sections of our City the past year.

Those who predicted, in 1896, a total failure in the building line in the various sections where the fire limits were established must, under the present conditions, be convinced that the City was wise in adopting first and second class construction in certain districts in the City. Without these restrictions, it would be a fair estimate to concede that fifty per cent of the buildings within the fire limits would be built of material much inferior to what has been used. The City is greatly benefited by the erection of these imposing and attractive structures, and this department is apprised of several large buildings to be erected the coming season that would not have been considered were it not for the protection that the City gives in compelling owners in restricted districts to build first or second class buildings.

It is of interest to note that in 1898 the estimated cost of new buildings was $1,487,205, while in 1899 the estimated cost is $1,605,735, showing an increase of $118,530. These figures indicate in a measure

the increased valuation of real estate in our City, although the estimate given includes only the new buildings, to which should be added a certain per cent of the cost of additions and alterations which is estimated at $154,160.

CITY BUILDINGS.

The various City buildings have received their usual care, but most of the money expended has been for interior work. The coming year will require an additional amount appropriated to allow for painting the City Hall and the Central Square Building, as the paint is badly worn and further delay would prove detrimental to the buildings. The principal change at the City Hall during the past year has been the removal of the Water Board work and repair shop in the basement, they having moved into a building on Auburn Street, built for their exclusive use. The room formerly occupied as their work room is now being used by the School Committee for the storage of school supplies.

The floor in the basement will have to be relaid another year as the timbers are entirely rotted away and the present condition of the floor I consider dangerous. I would recommend that an Asphalt floor be substituted for the present wooden one. Additional fire protection has been provided by introducing five Racine fire extinguishers distributed on the several floors.

During the summer vacation a much needed improvement was made in the Aldermanic chamber consisting of remodelling the President's desk and platform. The City Clerk's desk was moved from in front of the President's desk to the side, and an additional desk was built for the City Messenger. In order to make these changes it was necessary to enlarge the platform and build additional steps around the same. These changes have proved to be very satisfactory.

BRATTLE SQUARE BUILDING.

The principal outlay in this building was in the Armory, where an expense of over five hundred dollars was incurred for painting the drill hall and rooms adjacent. The iron fence in front of the building had to be reset as it had become dangerous, owing to the iron rods becoming loosened in their settings. The balance expended was for repairs on the roof.

CENTRAL SQUARE BUILDING.

I found the condition existing in the Armory similar to those in the Brattle Square Building, and early in the season had the hall and several

rooms repaired and painted. A safe was purchased for the use of the Registrars of Voters, a much needed fire protection for their valuable records. The other repairs were of the usual order.

WARD FIVE BUILDING.

This building in its present condition reflects no credit to this department, as it is not only illy adapted for the purpose for which it is being used, but after a careful inspection of its construction, I am convinced that in the near future it will be condemned as an unsafe structure, owing to the spreading of the walls and settlement of its foundations. Aside from its faulty condition, I consider the building in a very unsanitary state. I would recommend for your consideration the advisability of a new building to take the place of the present one, which is far inferior to the City's needs in this section.

BATH HOUSE.

On April 22, 1899, this building was destroyed by fire, and the Committee on Public Property deemed it unwise to rebuild upon the lines of the old building and more substantial and commodious quarters were provided. The wisdom of this change was fully demonstrated the past season by the number of bathers that availed themselves of the City's liberality.

The great need of increased facilities for bathers in our City and its desirability from a point of cleanliness, will call the attention of the City Council to the necessity of erecting permanent buildings in various parts of the City, that will give to its citizens bathing facilities throughout the year.

RIFLE RANGE, LEXINGTON, MASS.

In 1898, owing to the absence of the Militia from the City, the Range was not used, but upon their return a request was made in the early spring to have it put into proper condition for their use and this department expended the sum of $576.40. This was made necessary by the State requesting the City to furnish additional protection in the rear of the targets to prevent the bullets from going astray. Accordingly a large bulwark, 45 feet long by 12 feet high, was erected in the rear of the two hundred yard targets, made by planking on either side of 6x8 inch timbers and filling between the same with coarse gravel, and upon the face of this heavy corrugated cast iron plates were securely fastened to prevent the tearing away of the planking. This construction has proved very satisfactory.

CARE AND REPAIR OF CITY BUILDINGS.

CITY HALL.

For Fuel	$1,029 06
Electric lighting	902 68
Gas lighting	73 46
Repairs	1,155 99
Supplies	662 93
Janitor	1,200 00
Engineer	1,350 00
Fireman	730 00
Watchman	730 00
Sundry labor	2,462 48
Total	$10,296 60

WARD ONE BUILDING, BRATTLE SQUARE.

For Fuel	$691 60
Gas	361 59
Lighting tower clock	110 00
Repairs	631 96
Supplies	64 84
Janitor	1,400 00
Total	$3,259 99

WARD FOUR BUILDING, CENTRAL SQUARE.

For Fuel	$425 56
Electric lighting	183 00
Gas	69 47
Repairs	761 54
Supplies	273 90
Janitor	1,400 00
Extra labor	125 00
Total	$3,238 47
Miscellaneous	$1,664 61

SCHOOLHOUSES.

During the past year three new buildings have been finished and made ready for occupancy, viz., the Roberts, Ellis and the Latin Schools. The Peabody School was enlarged by the addition of eight rooms and a hall.

Extensive repairs have been made in the Morse, Putnam and Otis Schoolhouses, and at the present time the work on the Harvard School is fast nearing completion.

A more detailed account of the work which has been done on these buildings may be found in the report which follows.

At the time of writing my last report, the Peabody, Roberts, Ellis

Cambridge Latin School, Trowbridge and Ellery Streets. Completed 1899.

and Latin Schools were in an unfinished state, but during the year these buildings were completed and made ready for occupancy. The Roberts School was occupied for the first time June 16, 1899; the Peabody School addition, April 10, 1899; the Ellis School, September 14, 1899, and the Latin School, April 10, 1899.

A great deal of time and attention was given by this department to these buildings during the finishing process, and every detail was carefully watched in order that the City might have in these new buildings structures which should be second to none in the State.

LATIN SCHOOL.

The first official action taken in regard to a new Latin School building was by the City Council of 1895. In that year an order was approved November 7, making an appropriation of $2,500 for preliminary plans, the building to be erected upon the land adjoining the English High School, between Trowbridge and Ellery Streets. This order provided for a building, the cost of which was not to exceed $250,000, exclusive of furnishings. In response to a call for plans, fourteen sets were submitted, and, after a careful examination by a Commission consisting of Hon. William A. Bancroft, then Mayor; Francis Cogswell, Superintendent of Schools, and William H. Gray, Superintendent of Public Buildings, a selection was made, and five sets of plans premiated according to their merits; and, in order that no injustice should be done to the competitors and by authority granted by the City Council, the Commissioners called to their assistance Prof. Charles Howard Walker and Prof. Francis Chandler, who, after a careful and thorough examination of the entire sets of plans submitted, agreed with the Commissioners in their awards, which were as follows, in the order named: Hartwell, Richardson & Driver, E. Langford Warren, Cram, Wentworth & Goodhue, William F. Chamberlain, J. A. Schweinfurth and Timothy Walsh.

The first-named architects were awarded the contract for furnishing plans for the building, which in the main were their original plans, with some slight modifications.

The building which this firm designed and which has now been completed has a frontage on Ellery and Trowbridge Streets of 178 feet 8 inches, and has a depth of 201 feet. The general form of the building is the letter H. On January 30, 1897, thirty estimates were received for its construction and the contract awarded to John S. Jacobs & Son, of Boston, who were the lowest bidders. Active operations were begun on May 1, 1897. After a series of tests, the foundations covering a space of 201 feet by 173 feet were carried to a depth and of sufficient strength

to sustain the immense weight of the superstructure. The foundation walls are of block granite laid on concrete footing courses. The trimming stone is of Bedford, Indiana, limestone. The inside walls are of common hard burnt brick, furnished by the Bay State Brick Company, of Cambridge, Mass. The exterior brick are buff, $1\frac{1}{2}$ inches by 12 inches by 4 inches. The windows on the north, west and northeast sides have double sets of sash to provide against the severity of the weather.

The main entrances are on the northwest and southeast elevations, while leading from each corridor are four runs of fire-proof staircases from the basement to the top of the building. The staircases have treads of asphalt.

The building is heated by four steam boilers which are located in a well-equipped boiler room in the basement.

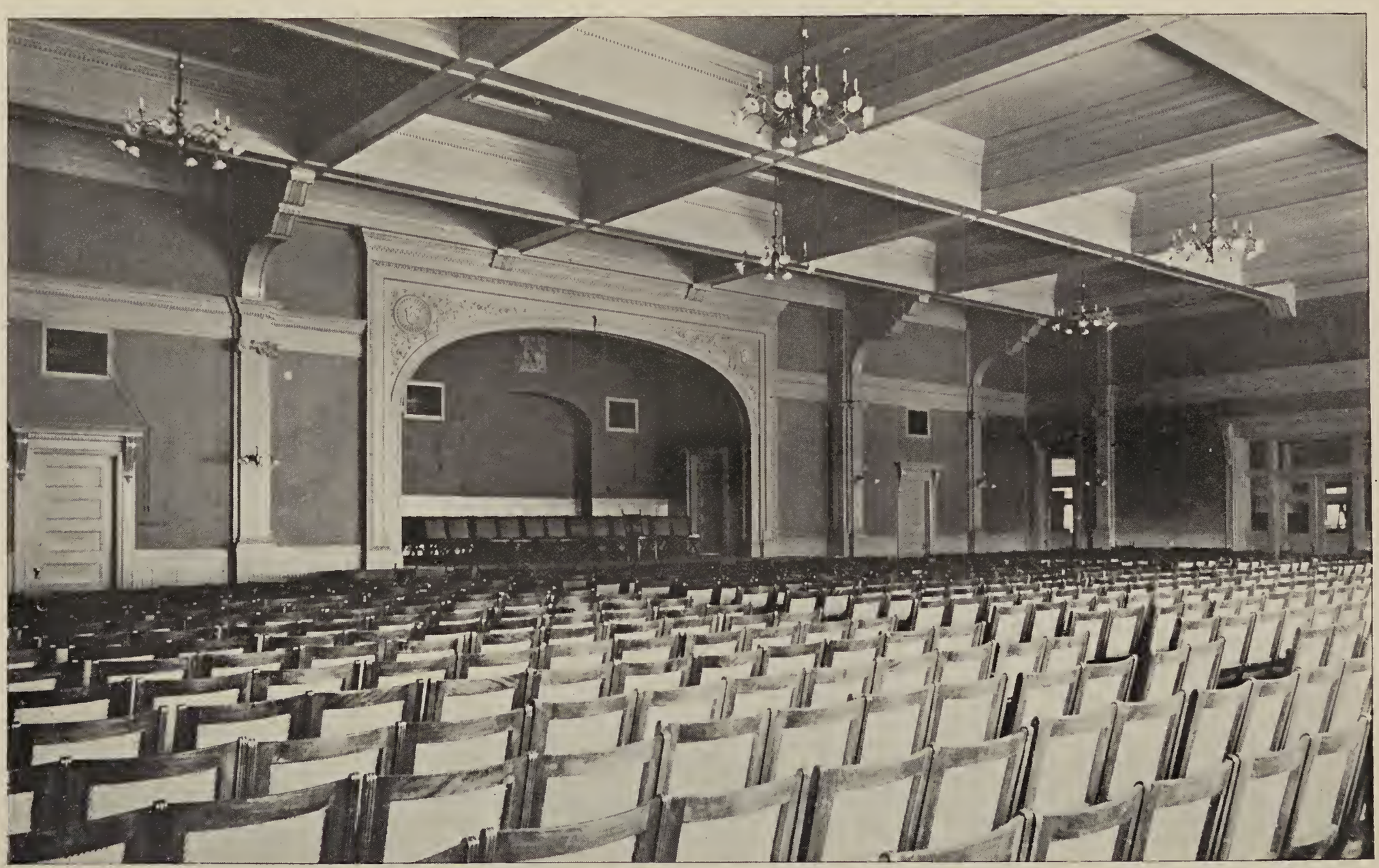
Scattered through the building are several stand pipes, each equipped with gate valves and fifty feet of fire hose with nozzle attached.

The interior finish is of carefully selected western ash, the floors being of rift heart Georgia pine, lined with asbestos paper. The building is wired through iron armored conduit for electric lighting, and is piped for gas.

On the right and left of the main entrance are the visitor's reception rooms. Emergency rooms with all necessaries in case of illness are provided. The assembly hall is located on the third floor and is well lighted through windows opening towards the south. The seating capacity of the hall is 900. In the basement is the lunch counter or cafe with a double counter equipped with every convenience. There are also in the basement bicycle rooms well equipped for taking care of the wheels during school hours.

The following statistics may be of interest:—

Number of common brick	3,000,000
Number of buff brick	245,000
Number of cubic feet of concrete	7,047
Number of cubic feet of block granite	18,000
Number of cubic feet of limestone	20,000
Number of square feet of slate blackboards	9,000
Number of square yards of plastering	28,000
Amount of flooring	800 squares.
Number of squares of slate on roof	370
Number of doors	200
Number of windows	300
Number of class rooms	15
Number of recitation rooms	11
Number of laboratories	6
Number of chairs in Assembly Hall	900
Number of chairs in lecture room	125



Assembly Hall, Latin School.

The following is a list of the contractors engaged in the different branches of work :—

Architects	Hartwell, Richardson & Driver	
General contractor	John S. Jacobs & Son	Boston
Clerk of works	Walter T. Littlefield	
Asphalt	Simpson Bros.	Boston
Common brick	Bay State Brick Works	Cambridge
Buff brick	Fisk, Holmes & Co.	Boston
Cement, masons' supplies, etc.	Ham & Carter	Boston
Electric clocks	Blodgett Bros.	Boston
Copper work	Thomas J Hinds	Boston
Decorators	F. X. De Lorey	Boston
Electrical work	Clark & Mills	Cambridge
Fans, motor, etc.	Sturtevant Blower Company	Boston
Fixtures, gas and electric	E. H. Drowne & Co.	Boston
Furniture, special	Derby, Kilmer Company	Boston
" general	Heywood Bros. and Wakefield Co.	Boston
" lecture room	Harwood Bros.	Boston
Glass (reflectors)	Pittsburg Plate Glass Company	Boston
Granite (cut)	Austin Ford & Son	Cambridge
Hardware	E. & R. Corbin Company	New Britain, Conn.
Heating and ventilating	Lynch & Woodward	Boston
Interior finish	R. C. Pingree & Co.	Lewiston, Me.
Iron (bars, etc.)	Chelmsford Foundry Company	Cambridge
" (grills, etc.)	Geo. T. McLaughlin	Boston
" (structure)	Berlin Iron Bridge Company	E. Berlin, Conn.
Lathing (fireproof)	Eastern Expanded Metal Company,	Boston
Marble	Troy Bros.	Boston
Painting	F. X. De Lorey	Boston
Pipe covering	H. W Johns Company	Boston
Pipe (lead lined)	Wakefield Lead Line Company	Wakefield
Plastering	Wm. J. Heron	Cambridge
Plumbing	Pierce & Cox	Boston
Plumbing fixtures	J. L Mott	Boston
Slate roof	T. J. Hines	Boston
Stone (Indiana limestone)	Connecticut Steam Stone Company,	Cambridge
Temperature regulator	Johnson Electric Company	Boston

A more detailed account of the accommodations of the building can be found in my annual report of 1896.

OTIS SCHOOL.

Much attention was directed towards this building owing to the criticism of the accommodations afforded for means of egress in case a fire should occur during school hours. The City Council was asked for an amount sufficient to pay for having the building remodelled and a modern structure made of it, accordingly when the annual appropriations were made the sum of $8,000 was allowed for these changes.

Plans were prepared and estimates received for doing the work through an advertisement which appeared in the *Cambridge Chronicle* of June 10th. Several estimates were received and the contract was awarded on June 16th to Mr. William Crane, who was the lowest bidder.

Work was immediately begun upon these changes, but owing to various delays caused by the failure of the sub-contractors in getting materials, it was necessary to delay the opening of the building for school purposes until the last of September.

Many improvements have been made in this building and conveniences provided for both teachers and scholars. The old stairways were removed and wings built on both sides of the building, in which new and commodious stairways were built affording ample means of egress.

A new system of heating and ventilating was substituted for the old which had long been a menace to the health of teachers and scholars.

The gradual abolition of the vault and antiquated system in connection with our school buildings was a prominent question in the remodelling of this building. The sanitary accommodations at this school were located in a brick and wooden building located in the rear of the schoolhouse, and had long been the subject of complaint from adjoining property owners. It consisted of a brick vault in which connections were made with the sewer. These fixtures, together with the building in which they were located, were entirely removed and individual closets substituted in the basement of the main building. A teachers' room, with all conveniences, was provided on the first floor. New wardrobes were provided for the pupils by dividing the hallways with iron grills.

Additional windows were put in the various rooms which greatly improved the conditions for the proper distribution of light. This building, with the changes made during the past summer, places in the hands of the School Committee a building modern in its construction, with conveniences that compare favorably with buildings of more recent date.

HARVARD SCHOOL.

This building was nearly destroyed by a fire which occurred on March 21, 1899. The roof of the building was entirely destroyed, and the interior was badly damaged. In consequence of this damage, an order was presented to the City Council, calling for an appropriation of $30,000 to replace this building. The order was passed on March 28, and approved March 29. On May 9, a further sum of $17,000 was appropriated, in order to make additions and alterations from the original plans. The plans presented and approved called for the third story to be built of brick, instead of wood, as formerly constructed. The building contains sixteen class rooms, a recitation room, library, Master's room, teachers' room, assembly hall with ante-room accommodations, and several large and commodious store rooms.

HARVARD SCHOOL

COR INMAN ST & BROADWAY, CAMBRIDGE

Geo Fogerty Arch Cambridge

Much care and attention has been given to the subject of properly lighting the various school rooms and corridors in the building. In order to secure proper results it was found necessary to introduce prism glass in two of the centre rooms on the southerly side, and large skylights were placed over each stairway which throws light down into the first story corridors. Additional sanitary accommodations are provided.

An entirely new heating and ventilating system has been installed and details studied to perfect accommodations that should place this schoolhouse in a class of buildings which should be second to none in our City. The work has so far advanced that the occupancy of the building will be in the near future.

The contract for doing this work was awarded to Briggs Bros., who were the lowest bidders that submitted estimates under an advertisement which appeared in the *Cambridge Chronicle* under date of April 8, 1899. The work on the reconstruction was begun promptly and has satisfactorily progressed up to the present time.

ADDITION TO THE PEABODY SCHOOL.

The addition to this building was completed in April of the present year and occupied shortly after. The work was carried on without any serious interference with the sessions of the school which were held in the old portion of the building. Brick sidewalks have been built, the granite curbing completed and the entire grounds graded, making the building and its surroundings one of the most attractive in the City.

A complete report of this building appeared in my report of 1898.

ELLIS SCHOOL.

This building was completed and made ready for occupancy in June of the present year, and in its complete state is as well equipped as any school building in the City. The building contains twelve class rooms, recitation rooms, teachers' room, library, Master's room and a large assembly hall having an accommodation for seven hundred pupils. The hall is provided with a stage and ante-rooms connecting.

The teachers' and Master's rooms are provided with modern conveniences, and are appropriately furnished. The occupation of this building has, as predicted, greatly relieved the crowded condition of this school district, and the City is to be congratulated upon the possession of buildings of this kind, so modern and convenient in every detail. For a complete detail of its appointments, I would refer you to my report of 1898.

ROBERTS SCHOOL.

In my report for last year a description of this new building was given, but at that time it was not completed. It was finished and furnished complete in June of the present year, and occupied for school purposes on June 16. The City has in this structure a well equipped school building of twelve class rooms, all of which are pleasant and well lighted. Besides these rooms, there are teachers' rooms, a Master's room, library and recitation room. On the third floor there is located the assembly hall, which has accommodations for seating six hundred persons. The dimensions of this building are 130 feet on Harvard Street and 87 feet 10 inches on Winsor Street.

SCHOOLHOUSES, CARE AND REPAIR.

The amount of money appropriated and expended for the care and repair of school buildings the past year exceeds that of any previous year since the organization of this department. The completion of three new buildings and the addition of the care of the Manual Training School made a large appropriation necessary.

A few statistics of our schoolhouse area may be of interest. Number of schoolhouses is 42, of which 26 are of brick and 16 are of wooden construction. The brick buildings contain 286 class rooms, while there are but 62 in the wooden buildings. In addition to the class rooms there are 28 recitation rooms, 3 chemical and 3 physical laboratories, 2 lecture rooms and 16 assembly halls, also principals', teachers' and library rooms.

The total floor area is 591,716 square feet, or 13½ acres and 3,656 square feet. The walks about the buildings cover an area of 124,067 square feet, or 3½ acres and 2,477 square feet.

HEATING AND VENTILATING CHANGES AT THE MORSE AND PUTNAM SCHOOLHOUSES.

In accordance with a recommendation made by this department, an order was passed by the City Council June 13th, and approved by the Mayor June 22d, appropriating $32,000, for sanitary and heating changes at the Morse Schoolhouse, corner of Brookline and Allston Streets, Ward 4, and at the Putnam Schoolhouse, corner of Fourth and Otis Streets, Ward 3.

The changes consisted in a complete renovation of the heating, ventilating and sanitary systems in these buildings and some other minor changes incident thereto. The drawings necessary for these extensive

Roberts School, Harvard Street, corner Winsor Street. Completed 1899.

changes were made by George Fogerty, of Cambridge, and the contracts were awarded to Messrs. Lynch & Woodward, of Boston, and Messrs. C. J. & C. M. Buckley, of Worcester, Mass.

In both of these buildings the Smeade system was entirely torn out and a modern system of heating, ventilating and plumbing installed. This work was done during the summer vacation and both buildings were ready for occupancy in the early fall.

During the summer vacation the following schoolhouses were painted: —Wyman, Reed, Lowell and Lassell.

Several of the wooden buildings will have to be painted the coming season, as the paint is badly worn. Several of the older schoolhouses are in a condition that require constant attention and it becomes a serious question how long they can be continued for school purposes.

The subject of heating, ventilating and sanitary arrangements of schoolhouses is one of the most serious and complicated questions that this department has to deal with. A schoolhouse with poor ventilating and sanitary arrangements places the City in a position where public criticism is justified. Absence of the pupil from the school is often traceable to conditions existing in the school buildings. A radical change in some of the schoolhouses would be necessary to put them in a proper condition and would require a large outlay of money, yet I feel that the results would warrant such an expenditure. Our City, which is foremost in its educational facilities, cannot afford to have public attention and criticism directed to the sanitary and ventilating systems in our schools. While criticism is often of an imaginary nature based upon reports eminating from an irresponsible source, whenever the attention of this department has been called to it, a thorough investigation has been given, and where any doubt was felt as to the necessity of changes being made, work was immediately done.

During the summer vacation nearly fifteen thousand dollars were expended upon sanitary changes in our schoolhouses. This work was done under an order issued by His Honor, the Mayor. The conditions found and the work done in these buildings appear in this report.

SANITARY INSPECTION OF SCHOOLHOUSES.

Upon a request from His Honor, the Mayor, that this department should have a thorough test made of the plumbing systems in the various school buildings in our City, and a written report made to him of their condition, the following report was submitted. I appointed Mr. C. M. H. Hunnewell, the Inspector of Plumbing, to personally superintend the work, and, under his direction, this work was thoroughly done.

Some ten years ago an unfavorable report by the State Inspectors

called public attention to the sanitary condition of our school buildings. Although the conclusions reached were at the time scouted, subsequent examinations confirmed their correctness.

The result was that some changes were instituted, principally in the direction of improved air ventilation and in some instances slight improvements in plumbing. Nothing, however, of a radical or substantial nature was attempted.

Upon the assumption of the position of the Superintendent of Public Buildings, the problem of schoolhouse sanitary reform was made a conspicuous part of the department policy. An investigation was instituted, and a definite policy of procedure determined upon.

My first determination was to place the department in line with City's general objection to the continued existence of privy vaults, and to abolish at once the barbarous practice of compelling children of tender years to resort to vile smelling and exposed outhouses, as dangerous to the health of the pupils as they were blunting to the sense of decency. The best authorities are united in recognizing the extreme danger in the sudden transition at certain seasons from the warmth of the school room to the icy temperature of the yard and outhouse, where fatal results are often traceable through the reluctance of the child to subject itself to this exposure.

I hereby submit the following report: Mr. C. H. M. Hunnewell was specially detailed to supervise personally the various tests made and the work as it progressed. The report which follows will show that a great deal of time has been given to this work, and that the tests have been made in the most thorough manner.

The first question which arose was the nature of the test to be used. It was desirable that the very best methods should be used, in order that the work might be thoroughly done and that if the slightest defect existed the same should be exposed. It was decided that the water test was the most satisfactory, and, as the report will show, this style of test was used generally in the different buildings. This necessitated the removal of all fixtures and the sealing of all open ends before a proper test could be made.

The following is a list of the buildings in which the water test was made: Agassiz, Allston, Cushing, Dana, New Gannett, Gore, English High, Holmes, Lassell, Old Latin, Lowell, Parker, Reed, Rindge Manual Training, Riverside, Shepard, Sleeper, Tarbell, Webster, Wellington, Wyman.

The following is a list of the buildings in which the water and smoke tests were made:—Old Gannett, Lee Street, Stearns, Rindge Manual Training Annex, Taylor, Thorndike, Willard.

The following is a list of the buildings in which the smoke test was used:—Boardman, Felton, Corlett, Russell.

These four buildings were recently fitted with new plumbing systems.

In the work of making these tests it was necessary to employ mechanics by day work as it could not be estimated just what conditions might be met. After making the plumbing tests and finding out the conditions which existed in each building, it then became necessary to remedy the defects found. This work was assigned to twenty firms of plumbers and the reports from these firms to this department are embodied in this report.

The omission of mention of the Dunster School is due to the fact that this system was thoroughly tested and put in condition previous to the summer recess.

Wellington School, Columbia Street.

The work on this building was performed by Moynahan & Co. They found in the cellar three drains, one of which was an earthern one which led from the vault in rear of the school. This drain was broken and patched in places. The trap was in a manhole outside of the building on the side wall. The conductors led into this by earthern pipe inside of the building without traps. The drain in old part of the building was iron pipe to rear wall where the earthern pipe entered, into which two conductors led without traps. The trap to this drain was in manhole under sidewalk. Several tests of the water closets were found to have broken vents and arms. One wash basin was untrapped. One water closet was not ventilated. Several fittings were found to be cracked and joints leaking. These fittings were broken out and repaired. A new 5-inch iron drain was put in from rear of school through the cellar taking in the conductor and an iron pipe placed in the manhole. Four conductors were taken to the drain with iron pipe and trapped. An iron pipe was placed in the second manhole and a 5-inch iron drain installed inside the building. A 4-inch stack was extended through the roof and vents from the new water closet. Bowl and sink were taken into the same. In the new part of the building there were installed two new syphon water closets, one new basin and seven new traps. In the vicinity of 300 feet of soil pipe was used in this building.

Old Gannett School, Columbia Street.

The work in this building was done by Moynahan & Co. A defective trap and waste pipe was found on second floor and several cracked fittings and pipes in cellar. A new trap and waste pipe were put in and several new fittings.

Allston School.

The work in the Allston School was performed by James A. Reid. There were found a great many leaking joints, cracked fittings and hubs. The joints in the urinals leaked badly. A basin on third floor was fitted with small waste and was double trapped and unventilated. The 2-inch wastes from sinks were not ventilated. One broken hopper was found and defective connections between traps and hoppers. There were in all about fifty broken fittings and hubs. This defective work was put in proper repair and carefully tested.

Lassell School, Charles Street.

The work on this building was performed by Buckley & Young. Several joints were found that were leaking and one made up with putty. There were also a number of cracked fittings and hubs. The defects were made good and the stacks from sinks and wash bowls were carried through roof. The work was carefully tested and left in good condition.

Gore School, Gore Street.

The work in this building was performed by John J. Long. A series of three wash bowls were found to lead to a $1\frac{1}{4}$-inch lead trap in cellar. The lower fixture was trapped separately and was not ventilated. This work was taken out and replaced by a heavy 2-inch iron waste pipe extending through roof.

Reed Street School.

The work on this building was performed by William Haley. Two water closets were found to be broken and several bad leaks in soil pipe were found to exist. This defective work was replaced by two new Combination H. and T. water closets, 4-inch heavy soil pipe from a point 10 feet outside of foundation wall, through the basement and 10 feet above the first floor. Four round lead traps were vented, new pipe was put in under the closets and various repairs made on tanks, ball cocks, valves, slate urinals, etc. The work was left in a thorough and first class condition.

New Gannett School.

The work on this building was performed by Charles A. Fallon. In the soil pipe system a large number of leaking joints were found, caused generally by neglect in filling the joints to the top with lead. It was necessary to refill and recalk these joints. Several cracked fittings were replaced by new. The earthern drain in the yard was replaced by a cast iron drain in which were located cleanout screws and a Barrett tide trap.

Agassiz School.

The work in this building was performed by A. Baumeister. In the soil pipes were found twenty-eight leaks in 4-inch joints, twenty-four in 5-inch joints, thirty-nine in 2-inch joints, one 2-inch split tee, one 2-inch split pipe. In the place of iron covers on traps brass cleanouts were placed. This work was in the basement. On the first floor one 5 by 2 split Y, seven 5-inch split joints, and seven 2-inch split joints were found. On the second floor six 5-inch joints, eight 2-inch joints, and in the attic nine 5-inch joints were found to be defective. These defects were all remedied.

Holmes School, Hilliard Street.

The work in this building was performed by Brock & Eaton, who found a large number of leaking joints which it was found necessary to recalk. It was also found that the sink and urinal traps were not vented. This was attended to and all defective fittings replaced.

The plumbing systems in the Russell, Cushing and Corlett Schools were tested and put in proper condition by J. T. Phelan.

Russell School.

On this system the smoke and disinfectant test was applied three different times before they were convinced that the piping and fixtures were in a proper condition. A few leaks were found which were repaired, and the caps in the conductor traps were reset.

Cushing School.

A number of cracked hubs and fittings were found in this building. The waste pipe from two sinks was of $1\frac{1}{2}$-inch lead, and was connected with the drain without ventilation from trap of either sink. It was found necessary to replace all the waste, drain and ventilation piping around the water closets, reset the urinals, and substitute for old urinal waste a larger one.

A portion of the drain in basement was replaced by new extra heavy pipe which was moved from west to south side of building and made to enter more directly into outside drain. The $1\frac{1}{2}$-inch lead wastes from sinks on first and second floors were taken out, and 2-inch iron put in. Both traps were vented by 3-inch iron pipe through roof. The old wooden conductors were replaced with 4-inch galvanized iron and 4-inch traps at the base.

Corlett School.

A few joints were found to be defective in this building and were recalked, and the system left in a perfectly tight manner.

The work on the Shepard, Sleeper and Stearns Schools was performed by Herbert L. Rose.

Shepard School.

The plumbing system in the new part of this building revealed one leaking joint, a few sand holes in the soil pipe, two split hubs, and a few joints which needed recalking. In the other part of the building the closets in the master's and teacher's rooms were in a bad condition. The blow-off from boiler entered this line, and it was necessary to take out the old and replace. This blow-off was run to a new location beyond the running trap.

Stearns School.

In this building one of the water closet traps was found to have no seat. A Barrett cleanout was put in. The sinks were changed so that all may enter one drain.

Sleeper School.

In this building there was found a few split fittings and hubs, some sand hole defects, and a few leaking joints. They were all remedied, and the system left in good condition.

Lowell School.

The work on this building was performed by Albert H. Ricker. There were found several leaking joints, two broken lengths of soil pipe, and several joints made up with putty. The outside earthern drain was close up to the wall, and was found to contain the root of a tree about ten feet long.

The work on the Willard, Felton and Boardman Schools was performed by Greene & Co.

Willard School.

In this school it was found that the blow-off from the boiler ran to the earthen drain in the basement. Several leaking joints in the back air pipes, two leaking sinks on the first and third floors, three broken urinals and several broken water closets were also found. All of these defects were remedied, and the system left in good order.

Felton School.

A 4-inch earthern trap was found ten feet outside the cellar wall which was not properly set. This was taken out and properly set. A few leaking joints were found and were repaired.

Boardman School.

Several leaks were found in the soil pipe and the cleanouts below the concrete. Nine tanks were found to bei n a bad condition and were repaired.

The work in the Dana and the Tarbell Schools was performed by D. J. Keefe & Co.

Dana School.

Several leaking joints were discovered, some of which were made up of putty and paper instead of lead and oakum. A large number of cracked fittings were found. The old earthern trap outside the wall was taken out and a new iron trap placed in the basement. The wastes from the urinals were taken out and larger ones substituted.

Tarbell School.

A 4-inch extra heavy soil pipe was put in in place of the old which was in such a bad condition that the system could not be filled with water. Under the closets the joints between the lead and the soil pipe were made of putty. The joints on the upright pipes were made of paper and putty. Under the sinks the lead pipe was run into the iron pipe and calked with rags and putty. All of the soil pipe was taken out and new put in in a proper manner. All other defects were remedied and the system left in good condition.

Wyman School.

The work in this building was performed by Brock Brothers. The soil pipe system was found to leak in almost every joint. The back air pipes were below the concrete and consequently were full of water. The house trap was cracked as well as a great many fittings. New pipe and fittings were put in and vents changed. New cesspools were made for conductors and the entire system left in good condition.

The work in the Lee Street and the Old Latin Schools was done by John H. Stevens & Co.

Lee Street School.

In this building the water test showed the plumbing in the front of the building to be tight with the exception of a cracked length of pipe. The pipe extending through the basement to the rear was disconnected and plugged up, the same at the present time not being in use.

Old Latin School.

In this building it was found that a great many of the calked joints leaked and several fittings were cracked. All of these defective joints

were made tight and thoroughly tested. Five of the closets and one urinal were broken and were replaced. A new system of local ventilation was run into main chimney.

Webster School.

The work in this building was done by Levi Hawkes. There are two drains from the building, one from the old part so called, and one from the new, both running into the sewer in Pleasant Place.

In the old part where there were seven sinks, one wash bowl, eighteen water closets, and eleven urinals, it was found that the main drain or soil pipe which is 5-inch iron extra heavy, comparatively tight and in good condition but the branches connecting with same from the various fixtures all leaking, scarcely one joint absolutely tight. All connections for water closets between iron traps and hoppers were leaking badly and were never in good condition. It was found necessary to excavate and open up every drain pipe and calk all joints before it would stand test.

The 2-inch pipe running to bowl in second story was leaking in several joints and some of the hubs broken. This was replaced with new. The above bowl was trapped, but had no ventilation, which was put in.

In the new part, which has eight urinals, fourteen water closets, two sinks and five wash bowls, several very bad leaks were found in main drain which is 6-inch extra heavy iron; also leaks in 4-inch upright which drains closet in second story. The 4-inch vent pipes running overhead were in bad condition, all joints leaking, and many of the hubs cracked. This pipe had to be wholly replaced with new, the old being very small and light hubs. It was replaced with Oberdroth Standard heavy hub, and properly hung with wrought iron hangers.

The branches in this part invariably leaked, and all had to be exposed. The rain water conductors were not trapped and lead traps from sinks were underground and corroded. These were renewed and proper trap vents put in. A large number of new hoppers were furnished. Some were cracked in flanges, some on rim, and most of them on arm where spud connects with flush pipe. They were Maddock connections put in with sulphur and invariably broken. These were replaced with long hoppers with Enterprise connections which clamp to bowl with rubber gaskets.

A great many repairs were also made in valves, ball cocks, seat gear, etc., and the work is now in as good condition as the present fixtures will permit.

The work on the Taylor and Thorndike Schools was performed by Wm. H. Sweeney.

Taylor School.

In this building a few leaks were found in the joints in the iron pipe and were recalked and thoroughly tested.

Thorndike School.

In this building a few minor leaks were found in the iron pipe and were made tight by recalking and both buildings left in good condition.

Parker School.

The work on this building was performed by A. S. Balcom. It was found that the system had a great many joints which needed to be calked and that several fittings needed to be replaced. In the 5-inch drain under the concrete a saddle hub was found which was not connected with the hub at all, and the hub itself was badly cracked. One slip sleeve was found which was never calked. Two closet bowls were broken. All these defects have been made good and thoroughly tested.

Russell School.

The work on this building was performed by D. J. Wild & Co., who found several leaky joints in the soil pipe and a cracked fitting. Several joints below the concrete were found to be made up without lead or oakum. Several water closets were found broken. These defects were made good and cleanouts placed in suitable places for future use. Local vents were put in the traps under three of the sinks and the work left in good condition.

The work of testing and repairing the plumbing in the English High and Manual Training Schools was done by Ernest W. Clark.

English High School.

All of the fixtures were disconnected and the system was filled with water for testing. There were so many leaks found that it was impossible to hold water in the system above the first floor. The bad joints permitted the water to escape faster than the supply could furnish it. On this account about all of the joints in the basement were made tight before the system above the first floor was tested. The upper part of the system was found to be in a similar condition. This building now has a tight and perfect system of piping.

Rindge Manual Training School.

The Manual Training School Annex was submitted to a peppermint test and found to be in a satisfactory condition. The few leaks which were found were made tight.

In the main building a water test was used, and many defective joints were discovered, as well as several broken hubs and fittings. These defects have also been thoroughly repaired, and the piping now is tight.

The examination made necessary by these tests has been most thorough and complete, and I can report that all public school buildings in our City are now in a thorough sanitary condition.

It should be remembered that the life of an ordinary plumbing job is seldom over a dozen years, that is, in anything like its original integrity. The deterioration is infinitely greater in a building containing a large number of fixtures and used some hundreds of times a day, and where the system is subjected to the jar of hundreds of pupils frequently moving with military precision of step

It would be a matter of great surprise and congratulation if in five years a number of leaks would not develop under pressure. So well is this point understood by sanitarians that a great number of expedients are resorted to for the purpose of discounting the effects, such as numerous continuations of drains through roof, main trap at end of system, etc.

With modern fixtures, efficiently flushed, plenty of traps, properly graded drains, numerous openings to the air, the public have little to fear from an occasional leak which will develop itself only under a heavy pressure.

While it might be much to claim that all this work has been performed with an equal degree of skill, the fact remains that none of it could be excepted.

Some of the men employed whom the department had reason to fear, were induced, by strong representations on the part of the inspector, to make special efforts in a satisfactory direction and the results have been most gratifying.

INSURANCE ON PUBLIC BUILDINGS.

I desire to call the attention of the City Council to the subject of fire damages on public buildings since 1896. In my report to your Body in that year I called to your notice the matter of considering the advisability of the City insuring its own buildings, so that when a fire occurred there would be a fund available from which repairs could be made without seriously crippling this deparment by using its funds which were appropriated for the ordinary running expenses in the care and repair of buildings.

The subject of self insurance seems to me to be worthy of your further consideration. One commenable feature would be that all the money accruing for the insurance could be placed to the credit of a building fund which could be used as occasion required towards the erection of other public buildings, and in this manner the entire cost of a new structure would not fall upon any one year.

Following is a list of fires which have occurred in our City Buildings since 1895: —

September 14, 1895. Stearns Schoolhouse, Harvard Street. Damage, $550.00.

January 17, 1896. Old Gannett Schoolhouse, Columbia Street. Damage, $450.00.

February 20, 1896. Allston Schoolhouse, Boardman Street. Damage, $400.00.

March 15, 1897. Sleeper Schoolhouse, corner of Dudley and Cedar Streets. Damage, $1,200.00.

March 31, 1897. Rifle Range, Lexington, Mass. Damage, $400.00.

March 21, 1899. Harvard Schoolhouse, corner of Broadway and Inman Streets. Damage, $35,000.00. This makes a total of $38,000.00, an average loss per year of $9,500.00.

The following is a table showing the amount of coal consumed in the various school buildings: —

	Tons.
Agassiz	50
Allston	70
Boardman	51
Cushing	15
Corlett	10
Dunster	25
Dana	15
Ellis	150
Felton	35
Gannett	40
Gore	60
Harvard	100
High	280
Holmes	15
Lassell	25
Latin (new)	400
Latin (old)	85
Lee Street	30
Lowell	25
Morse	200
Otis	30
Parker	50
Carried forward	1,761

	Tons.
Brought forward	1,761
Peabody	200
Putnam	175
Quincy	18
Reed	25
Rindge Manual Training	250
Riverside	25
Roberts	150
Russell	135
Sargent	28
Shepard	75
Sleeper	75
Stearns	25
Tarbell	35
Taylor	115
Thorndike	85
Washington	85
Webster	135
Wellington	140
Willard	75
Wyman	40
Total	3,652

REAL ESTATE BELONGING TO THE CITY.

SCHOOLS.

Buildings.	Location.	Feet of Land.	Valuation.
Agassiz	Sacramento Street	19,689	$24,000 00
Allston	Boardman Street	15,193	34,600 00
Boardman	Winsor Street	10,018	16,500 00
Bridge	Pioneer Street	4,646	1,900 00
Corlett	Holworthy Street	10,000	4,000 00
Cushing	Cushing Street	14,787	4,500 00
Dana	Centre Street	14,317	6,300 00
Dunster	Concord Avenue	10,000	6,000 00
Ellis	Norris Street	25,700	48,000 00
Felton	Amory Street	15,090	10,500 00
Gannett	Jefferson Street	15,434	15,000 00
Gannett (old) Wellington	Columbia Street	27,673	50,300 00
Gore	Gore Street	9,900	29,000 00
Harvard	Inman Street	20,494	56,000 00
High	Broadway	74,366	238,000 00
Holmes	Hilliard Street	11,182	10,500 00
Lassell	Charles Street	10,000	10,500 00
Latin	Fayette Street	37,828	55,900 00
New Latin School	Trowbridge and Ellery Streets	79,759	295,000 00
Lee Street	Lee Street	10,100	15,000 00
Lowell	Lowell Street	12,033	9,500 00
Morse	Brookline Street	25,650	80,000 00
Otis	Otis Street	8,270	24,000 00
Parker	Broadway	12,329	26,000 00
Peabody	Linnæan Street	21,813	75,000 00
Putnam	Fourth Street	14,400	74,300 00
Reed	Reed Street	12,000	5,200 00
Rindge Manual Training	Irving Street	81,128	100,000 00
Riverside	Putnam Avenue	11,198	8,000 00
Roberts	Harvard and Winsor Streets	16,400	47,500 00
Russell	Larch Street	33,073	45,000 00
Sargent	Broadway	9,995	7,000 00
Shepard	Massachusetts Avenue	14,755	37,000 00
Sleeper	Dudley Street	21,284	29,000 00
Stearns	Harvard Street	10,050	8,000 00
Tarbell	Grigg Street	19,500	12,000 00
Taylor	Charles Street	23,592	45,000 00
Thorndike	Thorndike Street	10,027	34,000 00
Washington	Brattle Street	14,951	35,000 00
Webster	Upton Street	25,839	59,000 00
Willard	Niagara Street	20,079	30,000 00
Wyman	Rindge Avenue	14,347	9,500 00

CITY BUILDINGS.

Buildings.	Location.	Feet of Land.	Valuation.
Ward One	Brattle Square	16,153	$76,000 00
Ward Four	Central Square	13,028	60,500 00
City Hall	Massachusetts Avenue	47,878	272,000 00
Station Four	Massachusetts Avenue	6,516	10,000 00
Station Three	Fourth Street	4,220	22,100 00
Engine House No. 2	Massachusetts Avenue	10,000	34,000 00
" " No. 3	Third Street	10,100	23,000 00
" " No. 4	Massachusetts Avenue	9,532	29,000 00
" " No. 5	Inman Square	6,000	15,000 00
" " No. 6	River Street	4,994	14,500 00
" " No. 7	Main Street	9,400	19,300 00
Hook and Ladder No. 2	Portland Street	11,931	15,000 00
Chemical No. 2	Lexington Avenue	15,262	14,500 00

SCHOOLHOUSES, CARE AND REPAIRS.

Schools.	Fuel.	Light.	Repairs.	Supplies.	Extra Labor.	Janitor.	Totals.
Agassiz	$216 84	$8 99	$1,046 28	$53 17	.....	$625 68	$1,950 96
Allston	274 95	128 93	2,475 65	234 70	$6 00	443 19	3,563 42
Boardman	190 86	28 69	445 24	7 45	.....	625 68	1,297 92
Corlett	65 19	.....	82 72	75	.....	234 62	383 28
Cushing	92 43	.....	430 66	9 25	.....	234 62	766 96
Dana	133 72	16 87	495 95	1 50	.....	295 40	943 44
Dunster	103 00	.....	650 91	26 00	.....	495 30	1,275 21
Ellis	533 95	.....	169 16	28 18	6 80	388 00	1,126 69
Felton	171 47	9 19	470 06	2 35	.....	295 40	948 47
Gannett	202 10	18 44	522 29	10 25	.....	469 24	1,222 32
Gannett (Old)	.....	4 30	25 00	.....	.....	495 33	524 63
Gore	299 40	24 20	610 79	138 61	.....	730 00	1,803 00
Harvard	.....	17 50	27 53	40 46	.....	852 55	938 04
High	1,012 75	303 45	2,449 28	83 12	186 81	1,800 00 808 18	6,643 59
Holmes	53 84	1 70	603 91	50	13 00	325 14	998 09
Lassell	165 67	.....	1,190 95	15 41	.....	365 00	1,737 03
Latin (Old)	383 49	8 18	1,807 88	28 05	.....	852 49	3,080 09
Latin (New)	895 88	51 00	204 18	269 19	65 82	1,199 86 554 98	3,240 91
Lee Street	188 42	12 85	282 58	8 75	.....	730 00	1,222 60
Lowell	182 64	3 06	663 04	24 63	.....	312 83	1,186 20
Morse	93 39	13 86	774 49	204 00	35 16	1,044 09	2,164 99
Otis	9 00	8 60	340 96	20 13	9 75	625 68	1,014 12
Parker	197 84	6 49	569 07	94 75	.....	521 36	1,389 51
Peabody	547 20	20 87	968 65	146 34	125 00	780 85	2,588 91
Putnam	46 64	125 13	808 16	34 83	37 00	1,042 80	2,094 56
Quincy	5 70	93	57 07	3 75	.....	260 57	328 02
Reed	101 15	.....	890 96	16 25	.....	365 00	1,373 36
Ringe, M. T.	595 63	130 82	621 67	265 12	192 55	1,099 72 990 13	3,895 64
Riverside	128 95	.....	478 08	2 95	.....	338 90	948 88
Roberts	562 10	10	71 33	27 18	16 00	416 00	1,092 71
Russell	436 14	13 61	449 49	12 19	.....	730 00	1,641 43
Sargent	96 10	256 14	57 80	1 10	.....	443 19	854 33
Shepard	295 39	46 74	635 72	220 95	.....	730 00	1,928 80
Sleeper	335 82	.....	394 48	33 63	.....	651 78	1,415 71
Stearns	125 00	33 68	444 82	14 92	.....	295 56	913 98
Tarbell	138 50	.....	864 73	7 56	.....	338 90	1,349 69
Taylor	522 74	18 40	602 15	73 48	30 75	730 00	1,977 52
Thorndike	336 67	86 87	440 53	47 81	.....	730 00	1,641 88
Washington	387 90	59 96	81 92	34 73	.....	630 55	1,195 06
Webster	599 70	205 13	787 51	88 15	.....	938 56	2,619 05
Wellington	572 20	18 43	2,043 45	250 73	.....	495 33	3,380 14
Willard	300 90	15 30	404 17	14 70	.....	730 00	1,465 07
Wyman	183 09	.....	1,510 81	6 75	.....	417 12	2,117 77
All Schools	120 33	62 75	29 28	1,831 51	300 25	512 50	2,856 62
	$11,904 68	$1,761 16	$28,981 36	$4,435 83	$1,024 89	$28,992 08	$77,100 00

PLUMBING DEPARTMENT.

Mr. C. H. M. Hunnewell, Plumbing Inspector, makes the following report:—

Number of applications received and permits granted	920
Number of inspections made	2,593
Number of jobs found defective or otherwise not in accordance with the plumbing ordinance	44
Number of master plumbers registered	47
Number of master plumbers licenses granted	3
Number of journeymen plumbers licenses granted	4
Number of master and journeyman plumbers licenses renewed	41
Number of permits cancelled	7
Amount received for license fees	$28 50

INSPECTION OF BUILDINGS.

The following is a table showing the number of inspections made by this department and the character of alterations ordered when the services of the Inspector have been required in the interest of public safety and the proper enforcement of the building ordinance. The inspection of private buildings is in charge of Mr. James W. Emery, Deputy Inspector:—

Inspection of private buildings	1,943
Inspection of City buildings	1,519
Inspection of chimneys	513
Inspection of buildings to be moved	9
Foundations condemned	2
Defective conductors and gutters	9
Dangerous chimneys	8
Using soft brick in foundation walls	11
Buildings too near adjoining lot	2
Buildings condemned and ordered torn down	1
Buildings in dangerous condition	5
Faulty construction of fire places	14
Building without a permit	5
Permits cancelled	2
Changes ordered in furnace pipes	23
Plans rejected	7
Changes ordered in plans submitted	29

The following table shows the number of permits granted in each Ward and the use for which they were intended:—

Buildings.	WARDS.				
	1	2	3	4	5
Additions	44	28	10	18	30
Alterations and repairs	21	25	23	18	11
Carriage houses	4	6	3	13	9
Chimneys	1	.....	.....	1	.....
Dwellings	37	59	5	30	55
Dwellings and stores	.....	2	2	3	5
Factories	.....	4	6	6	1
Foundations	8	16	2	13	9
Heating apparatus	6	5	3	9	1
Stables	4	1	1	6	4
Stores and offices	3	6	5	5	7
Storehouses	1	1	3	2	5
Miscellaneous	12	9	5	10	3
	141	162	68	134	140

Of the foregoing permits, 614 were issued for wooden structures and 31 for brick and stone, making a total of 645.

BRICK BUILDINGS.

Apartments	7	*Brought forward*	23
Apartments and stores	3	Shop	1
Bakeries	2	Stables	2
Dormitories	2	Storage	2
Factories	7	Stores	2
Locker house	1	Wagon shed	1
Mechanical	1	Total	31
Carried forward	23		

Number of permits granted for each month for the years 1897 and 1898:—

	1898.	1899.
December	31	30
January	19	31
February	17	14
March	65	65
April	50	86
May	52	71
June	71	86
July	54	72
August	49	53
September	53	61
October	52	36
November	53	40
Totals	566	645

REPORT OF THE CHIEF OF POLICE

To His Honor the Mayor, and the City Council of the City of Cambridge:—

Gentlemen,—In compliance with the City Ordinance, I have the honor to present my annual report of the work of the Police Department for the year ending November 30, 1899.

The whole number of arrests for the year has been three thousand, one hundred and thirty-eight (3,138) against three thousand, one hundred and eighty-five (3,185) last year; a decrease of forty-seven (47).

Males	2,930	Adults	2,436
Females	208	Minors	702

The offences for which arrests have been made are as follows: —

Adultery	7	Fornication	5
Assault and battery	196	Gaming, or present at	42
Assault, felonious	6	Itinerant vendor	1
Assault on officer	6	Idle and disorderly	7
Assault, indecent	5	Insane	22
Assault, mutual	2	Illegal transportation	3
Abandoning child	1	Illegal sale of liquor	5
Arson	1	Keeping open shop on Lord's day	2
Attempt to break and enter	4	Keeping liquor with intent to sell	4
Bastardy	17	Keeping unlicensed dog	12
Breaking and entering	72	Keeping gaming nuisance	2
Bigamy	1	Liquor nuisance	17
Burglary	2	Larceny, simple	189
Capias	35	Larcency from building	4
Common drunkard	10	Lewd and lascivious	5
Contempt of court	2	Loitering	8
Conveying leased property	3	Malicious mischief	34
Conveying mortgaged property	3	Manslaughter	1
Cruelty to animals	6	Making bonfire	8
Delirum tremens	3	Non-support	64
Dipsomaniac	1	Neglected children	26
Disturbing public peace	231	Obtaining goods by false pretence	1
Disturbing public meeting	1	Obtaining money by false pretence	4
Disorderly house	1	Obstructing street car	7
Defrauding	4	Polygamy	2
Drunkenness	1,657	Promoting a show	3
Disturbance on street car	13	Peddling without a license	2
Embezzlement	12	Playing craps on the Lord's day	23
Escaped prisoners	4	Profanity	1
Evading car-fare	3	Receiving stolen goods	2
Exposure of person	4	Runaways	1
False pretences	4	Robbery	5

Selling goods with illegal measure	1	Violating city ordinances	144
Safe keeping	7	Violating liquor law	1
Stubborn children	15	Violation of milk law	11
Stealing a ride	1	Violating park rules	20
Suspicious persons	19	Violating rules Board of Health	4
Setting fire	1	Violating conditions of pool license	1
Tramps	3	Violating conditions of victuallers' license	1
Threatening	7	Violating building law	1
Truants	9	Violating terms of probation	2
Trespass	30	Violating terms of State license	5
Unlawful use of milk cans	3	Vagabonds	2
Using unsealed measures	1	Walking on railroad track	81
Vagrants	40		

Whole number of lodgers, 197.

Male	196	Minors	10
Female	1	White	192
Adults	187	Colored	5

NATIVITY OF PRISONERS.

United States	1,639	West Indies	6
Ireland	778	Egypt	3
British provinces	319	Greek	9
England	65	Prussia	1
Sweden	44	Finland	2
Scotland	48	Norway	3
Germany	24	Austria	4
Italy	24	Wales	6
Portugal	7	Asia	4
Russia	29	China	3
France	9	Switzerland	1
Poland	8	Cuba	1
Arabia	1		

MISCELLANEOUS BUSINESS.

Accidents	100	Defective streets and sidewalks	1,020
Buildings found open and secured	383	Defective streets made safe	27
Cases investigated	1,385	Disturbances suppressed	98
Dangerous chimneys	1	Dogs killed	39
Dead bodies found	9	Fire alarms given	19
Defective cesspools	23	Fires extinguished without alarm	1
Defective gas pipes	22	Lost children restored	236
Defective water pipes	96	Sick and injured persons assisted	42
Defective hydrants	3	Stray teams put up	32
Defective wires	17	Street obstructions removed	1
Defective lamps	2,829	Water running to waste	34

Amount of property reported stolen	$7,145 00
Amount of property recovered	6,605 00

CITY PROPERTY IN USE BY POLICE DEPARTMENT.

219	badges	$150 00		*Amount brought forward*		$2,366	50
87	belts	108 00	3	police signal systems		12,000	00
8	books	26 00	3	patrol wagons		1,000	00
4	bookcases	32 00	93	revolvers		450	00
8	bedsteads	40 00		Ropes and stakes		10	00
	Bedding and blankets	40 00	3	robes, carriage		20	00
1	buggy	200 00	1	rogues' gallery		150	00
8	clocks	25 00	3	saddles and bridles		12	00
2	bureaus	3 00	2	safes		200	00
80	chairs	100 00	95	short billies		42	00
1	carpet	10 00	8	spittoons		2	00
	Letter press and stand	10 00	1	sleigh		25	00
200	copies of police rules	40 00	1	stove		8	00
11	desks	125 00	2	straps and weights		1	00
1	easy chair, matron's	10 00	1	telephone line		300	00
5	horses	500 00	3	thermometers		1	50
6	harnesses	120 00	6	tables		24	00
5	horse blankets	15 00	40	tin dippers		9	00
4	halters	1 00	20	towels		4	00
1	hat rack	50	1	typewriter and desk		140	00
6	inkstands	3 00	2	umbrella stands		2	00
36	lanterns	27 00	1	wagon van, old		25	00
1	lounge	5 00	5	waste baskets		1	00
8	mirrors	14 00	4	water coolers		30	00
3	maps	15 00	1	wardrobe		10	00
10	rugs	20 00	4	water pails		1	00
9	pairs of handcuffs	27 00	2	wagon jacks		2	00
1	police van	300 00		Operating table and chair		37	50
1	ambulance	400 00	3	medicine cabinets		75	00
	Amount carried forward	$2,366 50		Total		$16,948	50

SIGNAL SYSTEMS.

In the three signal districts during the past year there have been :—

Duty calls by officers	366,891
Telephone calls	16,613
Wagon calls	1,636
Miles run	2,970
To fires	28
Sick and injured persons carried to hospital	13
Sick and injured persons carried home	8
Other runs	178

EXPENDITURES.

Boarding horses	$300 00
Buttons	50 00
Boston Elevated Railway Company	250 00
Boston Ice Company	12 00
Cambridge Gas Light Company	630 24
Cambridge Electric Light Company	149 44
Cleaning stations	230 10
Cloth for department	576 27
Clipping horses	5 00
Coal for department	245 46
Directories for department	29 00
Amount carried forward	$2,477 51

Amounts brought forward	$2,477 51
Diaries for department	$68 50
Expressing	9 32
Fresh Pond Ice Company	24 70
Feeding prisoners	40 60
Gas Consumers' Association	33 00
Hay and grain	204 92
Heating and care of buildings	890 00
Medical attendance	7 00
Medicines	5 81
New England Telephone and Telegraph Company of Mass	469 28
Photographs for rogues' gallery	63 83
Printing	186 29
Policemen, services of	102,574 60
Repairs on wagons	190 60
Repairs on harnesses	24 70
Repairs on revolvers	11 83
Revolvers for department, new	30 00
Repairs on buildings	179 87
Salary of Chief of Police	1,800 00
Salary of Deputy Chief of Police	1,500 00
Salary of Captains and Inspector	5,600 00
Shoeing horses	102 75
Supplies for stations	452 09
Travelling expenses	51 15
	$116,998 35
Appropriation	$117,000 00
Expenditures	116,998 35
Balance unexpended	$1 65
Expenditures	$116,998 35
Receipts	5,884 96
Balance showing actual cost	$111,113 39

THE FORCE.

The organization of the force consists of a chief, deputy chief, three captains, one chief inspector with the rank of captain, one assistant inspector with the rank of lieutenant, six sergeants, eighty-three patrolmen, nine reserve officers, four drivers of patrol wagons, two drivers of ambulance and two matrons.

Twenty-seven patrolmen are on duty in the day time, one in the Public Library, one in the City Hall, one detailed as clerk at Police Headquarters, one in Police Station 4, and twenty-three for street duty.

During the night time six sergeants and fifty-six patrolmen are on duty, one as house officer in Police Station 4, two in wagon houses, and fifty-three for street duty.

CHANGES.

During the year two officers have died. One of the vacancies caused by death has been filled from the reserve force.

An increase has been made to the force by the addition of five reserve officers.

Leonard Shackford was appointed March, 1867; died August 31, 1899.

Sergeant Andrew Sproul was appointed January, 1861; died October 27, 1899.

NO-LICENSE LAW.

Although a constant effort is made, each year under the no-license law it becomes more difficult to get evidence to convict persons who do an illegal business, the few persons who attempt to sell liquor in violation of the law are more careful and a very little illegal business is done.

SIGNAL SYSTEMS.

The signal systems under the care of Mr. Hopewell, Superintendent of Wires, are in good working order, very little trouble is experienced.

Nine new boxes have been added during the year, four in District 1, two in District 2, and three in District 3.

AMBULANCE.

The ambulance has been called to two hundred and sixty-three accidents and thirty-nine removals.

MATRONS.

There were two hundred and eight females arrested during the year, an increase of eleven over last year, all have received the attention and care of the matrons.

UNIFORM CLOTH FOR THE DEPARTMENT.

There has been purchased during the year cloth for the department to the amount of $576.27. The money for sale of cloth to the officers has been paid to the City Treasurer.

RECOMMENDATION.

I would respectfully recommend the remodeling of the building owned by the City, situated on Massachusetts Avenue, used as a police station and formerly occupied in part by the fire department.

CONCLUSION.

To his Honor, the Mayor, the City Council, the City Solicitor, and all others who have so kindly co-operated with me in the performance of the duties of my office, I desire to express my sincere thanks.

LOTHROP J. CLOYES,
Chief of Police.

REPORT OF THE TRUSTEES OF THE CAMBRIDGE PUBLIC LIBRARY

To the Honorable, the City Council:—

The trustees of the Cambridge Public Library have the honor to submit herewith their forty-second annual report, this being for the year ending Nov. 30, 1899. The librarian states that 3,847 volumes have been added to the library during the year, and 1,595 have been discarded as worn out or for other reasons; 9 have been destroyed on account of contagious diseases; 44 have been exchanged as duplicates, and 33 are accounted for as lost; some of these being, no doubt, due to the removal of parties from the city. When we consider that the annual circulation has amounted during the year to 175,026, this proportion of loss seems very small, especially in view of the large number of volumes directly accessible in the reading-rooms. The total number of volumes now in the library is 56,315.

The librarian's report calls attention to several improvements recommended by him in the provision for the library. *First*, an addition to the stack which has now become overcrowded. *Second*, the more complete detachment of the children's department from that for adults. *Third*, the provision of enlarged quarters for the East Cambridge branch. The trustees fully recognize the necessity of the first of these changes and also of the second, provided, however, in the latter case, that the rearrangement be so carefully planned as not to confine young people too long to the department of juvenile books, but to make the transition easy for them to maturer reading. The third recommendation they also accept as a necessity, but must emphasize the fact that whatever is done for the East Cambridge branch will inevitably be made a precedent for similar action in other parts of the city, and must therefore be entered upon in a careful and guarded way. The cost of carrying on the library will obviously increase very fast with the addition of new branches and especially should this involve the erection of buildings for this purpose.

The new catalogue of works of fiction will undoubtedly be found a great source of convenience in the administration of the library as well as to readers. Opinions differ as to whether such catalogues tend to increase the relative circulation of the works so catalogued. The proportion of fiction taken by borrowers varies but slightly from year to

year, and is smaller in this library than in many public libraries. It is commonly estimated at about three-quarters of the number of volumes lent, but with us it is usually about seven-tenths. This proportion undoubtedly seems large in either case. It must always be borne in mind, however, that this seeming excess is balanced by two facts not always remembered by critics. First, that a larger and larger proportion of historical and scientific information is now put by writers into the form of fiction; and, second, that works of fiction, especially for juvenile readers, are read much more rapidly, and are, therefore, exchanged much oftener, thus swelling the statistics disproportionately. It must be remembered also that a large number of families in Cambridge, including some of the most cultivated, draw their supplies from the university library, where the books are now by improved arrangements made more and more accessible.

The trustees gladly take this opportunity to express their renewed confidence in the excellence of the present librarian and of his staff, and they note with pleasure that the recognized prominence of Mr. Gifford among the librarians of the state has manifested itself in his recent election as president of the Massachusetts Library Club.

T. W. HIGGINSON,
WILLIAM TAGGARD PIPER,
In behalf of the Trustees.

REPORT OF THE LIBRARIAN

CAMBRIDGE, MASS., November 27, 1899.

To the Trustees of the Cambridge Public Library: —

GENTLEMEN: — The work of the library for the past year shows satisfactory progress with no changes of marked significance. Perhaps the most important event has been the completion of the fiction catalogue, a book of 415 pages, printed by the Co-operative Press and issued in June last. Our fiction has now for the first time been systematically catalogued, and the publication of a succeeding or of a supplementary list will be a task of much less magnitude.

The classification of the other departments of the library advances constantly. The amount of time, however, which can be given to this purpose is very limited, as the steady supply of new books always demands first consideration. Since the fiction list has now been printed, I think Miss Smith may be able to assist in the preparation of the catalogue cards for the older books, a part of our work in which Miss Russell has heretofore had very little help. With this end in view, I recommend the purchase of another Hammond typewriter.

The growth of the library and the constant changes caused by the classification of the older books make it imperative for me to urge again upon your attention the necessity for an addition to the stack. The branch library, the deposit collections, and the weeding-out of duplicates no longer needed have all helped to a small extent in providing more room. But the relief thus obtained is but temporary; and, in order to procure anything approaching a satisfactory arrangement of the library, both careful planning and the moving about of large numbers of books are required with increasing frequency. Moreover, there are at least two departments of the library for which more room is particularly necessary, if we are to expand them to meet requirements already made manifest. I refer to music and photographs. We received from the Moring estate a small number of photographs, which might form the nucleus of a collection that would be of decided usefulness, especially to many of our teachers.

CHILDREN'S ROOM.

In my last annual report I called your attention to the need of more room for the children. The endeavor to attract and retain the interest of children has become within a very few years an important means of widening the influence of the public library. This feature of its work is still too new to admit of a sharp definition of its scope, and there are not lacking occasional indications of a tendency to encroach somewhat unwisely upon the duties of the parent and of the teacher. Speaking generally, however, there would seem to be few more effective methods of strengthening the position of the library in the public mind than by inculcating the habit of taking advantage of its privileges at a time when habits are readily formed.

To get the best results from the attempt to give particular attention to children, the department of the library devoted to them should be made as nearly independent as possible. For this reason, I hope the time is not far distant when all our juvenile books may be placed in the children's room in charge of a special attendant. These books would then be taken out directly from this room instead of being charged, as they now are, at the general delivery desk. By the adoption of this plan not only would the interests of the children be cared for more efficiently, but the comfort of the older patrons of the library would be subserved to an equal degree. The wing of the building in which the children's room is now located need not necessarily be enlarged to carry out this project. If, when the stack be extended, provision can be made elsewhere for the school and local delivery work, the space in the present room that will then be made free will suffice at least for the outset.

EAST CAMBRIDGE BRANCH LIBRARY.

The East Cambridge branch library has been well patronized, although its circulation has fallen off 1,957 as compared with the figures of last year. The present rooms were the best we could obtain when the branch was started, but as time goes on they become more and more inadequate. Nearly all the shelf room is now occupied, and no further increase seems practicable. Much the most important objection, however, to the present quarters is caused by the fact that the space for readers is so small. The rooms are frequently overcrowded in the evening and, not having been designed for their present purpose, are ill-ventilated. In a library of this kind, the reading-room facilities constitute, in my opinion, the most important feature; and since the experience of the last two years has made evident what we lack in this respect, I recommend the

removal of the branch whenever suitable rooms may become available. I know of none at present, and I think our only opportunity to obtain what we need will come through the erection of some new building.

Believing, as I do, that our library should have at least two branches in addition to the present one, I have no thought of recommending the building-up of a library in East Cambridge on a scale so expensive that the establishment of similar institutions may in any way be discouraged. But before we seek to locate branches in other parts of the city, I think it a wise policy to meet the urgent and reasonable demands of the branch we already have, and by following this plan we shall be able to determine with greater accuracy the probable cost of any further development of this part of our work.

LIBRARY STAFF.

By means of a rearrangement of the time of the desk attendants, one of the assistants is now assigned to the reading-room, during the busiest hours of the day, for the purpose of helping people who wish to make use of the library. In my last report I brought to your notice this need, which has long been apparent, but which we have found it impossible to obviate until recently. Miss Callender, to whom this new duty has been assigned, is well equipped for the varied demands that are made upon her, and I feel sure she will make the position one of increasing usefulness to the public.

As a result of the partial change in Miss Callender's duties, Mr. Thayer, who entered the employ of the library in 1897, after finishing his course in the English high school, is now at the delivery desk during certain hours of the day. The value of his services to the library has been shown in many ways and is not adequately indicated by the promotion we have thus far been able to give him.

Mr. William B. Cade, who had been our carrier since May, 1890, died suddenly in September last. By his death the library lost the services of a diligent and painstaking official. Mr. William T. Ralph, who had assisted Mr. Cade at various times, was chosen his successor.

Sergeant Andrew Sproul, of the Cambridge police force, who died on the 28th of October, had been detailed for duty at the library for about eight years. Mr. Sproul's work was faithfully done, even when failing health rendered the performance difficult, and he was respected by all his associates.

There has been but one change in the agents of our local delivery stations during the year. Mr. P. A. Yerxa has taken the store on Holworthy street, formerly occupied by Mr. H. F. Grant, and has succeeded Mr. Grant in the care of our work.

STATISTICS.

In the appendices following this report you will find the statistics for the year. The circulation has fallen off slightly, but the difference is more than accounted for by the decrease at the East Cambridge branch, to which I have already referred. At the main library there has been a small increase, although both here and in the case of the schools there has been little variation from the figures of last year.

The local circulation fell off during the early part of the year but shows an increase during the last quarter. Since so large a percentage of the circulation is made up of fiction, the new catalogue should prove of much greater service to the patrons of the local stations than to the frequenters of the main library, where the card catalogue is always accessible. The value of the deposit collections to which I called your attention a year ago is shown again by the fact that the loss in circulation through the local deliveries is almost counterbalanced by the gain made through the deposits. Whenever satisfactory locations can be found, I hope to establish a few more of these collections, especially in the districts of the city where the local stations have met with least success.

Of the gifts received during the year, the most noteworthy has been that of Mrs. James Barr Ames, who has presented a set, nearly complete, of the publications of the Egypt Exploration Fund. We have also received some books from Mr. F. Apthorp Foster, who has made many welcome donations to the library.

Respectfully submitted,

WILLIAM L. R. GIFFORD,
Librarian.

APPENDIX I

GENERAL STATISTICS.

Total number of volumes in the library	56,315
Volumes added during 1899	3,847
Volumes condemned	1,595
Duplicates exchanged	44
Volumes destroyed on account of contagious diseases	9
Volumes lost	33
Volumes bound	3,100
Postal cards sent for books overdue	4,360
Present number of card holders	23,167

CIRCULATION.

	Central.	Local, including branch library.	Schools.	Total.
First Quarter	35,467	12,445	2,998	50,910
Second Quarter	31,438	12,162	2,368	45,968
Third Quarter	25,376	9,399	.....	34,775
Fourth Quarter	29,717	10,507	3,149	43,373
Total	121,998	44,513	8,515	175,026

Average per day (Central library)	400
Average per day (Local stations)	299
Average per day (Schools)	237
Largest issue (Central library), Feb 25	1,003
Largest issue (Local stations), Feb. 25	331
Largest issue (Schools), Dec. 9	483
Smallest issue (Central library), Feb. 13	122
Smallest issue (Local stations), Sept. 18	72
Teachers' books drawn directly from library	1,909

CLASSIFIED CIRCULATION.

Classes.	Biography.	Current magazines.	Fiction, including juvenile fiction.	Foreign literature.	General works.	History.	Literature.	Science and arts.	Travels.	Total.
Central library	4,241	3,366	88,110	2,454	1,374	4,486	10,607	6,653	3,707	121,998
Local stations	667	329	19,654	318	428	571	1,007	942	724	*24,040
Schools	480	49	5,060	30	201	625	505	753	812	8,515
Total	5,388	3,744	109,224	2,802	2,003	5,682	12,119	8,348	5,243	154,553
Per cent	.035	.024	.707	.018	.013	.037	.078	.054	.034	

* The circulation of the East Cambridge branch and of the deposit collections, amounting to 20,473, has not been classified, and was accordingly deducted before computing this table.

SCHOOL DELIVERY.

Name of School.	Agassiz.	Allston.	Ellis.	Harvard.	Latin.	Morse.	Peabody.	Putnam.	Roberts.	Russell.	Shepard.	Sleeper.	Taylor.	Thorndike.	Washington	Webster.	Wellington.	Total.
Books delivered..	21	873	118	381	55	296	449	1,537	270	1,165	277	318	529	643	464	145	974	8,515

LOCAL DELIVERY.

Stations.....	Whalen.	Hunnewell.	Phillips.	Grant. { Yerxa. }	East Cambridge.	Gove.	Dow.	Prospect Union.	Deposit collections.	East Cambridge branch.	Total.
Books delivered.	2,261	9,508	1,197	1,348	1,788	3,175	2,823	1,940	4,733	15,740	44,513

ADDITIONS (INCLUDING REPLACED BOOKS).

Source.....	City appropriation.	Citizens' subscription fund.	Cummings fund.	Fay fund.	Gifts.	By exchange.	Total.
Books.....	3,482	21	4	24	315	1	3,847

APPENDIX II

AMOUNTS RECEIVED BY THE LIBRARIAN AND DEPOSITED WITH THE CITY TREASURER

	Fines.	Catalogues.	Paper stock.	Total.
December-February	$160 63	.....	$2 37	$163 00
March-May	151 73	.....	3 02	154 75
June-August	115 62	$17 10	2 85	135 57
September-November	119 73	19 65	3 01	142 39
Total	$547 71	$36 75	$11 25	$595 71

CITY APPROPRIATION.

Appropriation		$20,000 00
EXPENDITURES.		
Binding	$1,402 95	
Books and periodicals	4,710 56	
Bulletin	348 25	
Carrier	542 11	
Fiction list	628 35	
Fuel	443 59	
Furniture	147 07	
Incidentals	422 49	
Insurance	432 00	
Lighting	1,063 68	
Local stations	412 50	
Printing	281 32	
Repairs	302 54	
Salaries	8,861 09	
		$19,998 50
Amount unexpended		$1 50

SPECIAL APPROPRIATION FOR EAST CAMBRIDGE BRANCH LIBRARY.

Appropriation		$1,230 00
EXPENDITURES.		
Binding	$32 16	
Books and periodicals	174 70	
Incidentals	12 75	
Lighting	27 56	
Rent	200 00	
Salaries	779 00	
		$1,226 17
Amount unexpended		$3 83

FUNDS OF THE TRUSTEES.

Citizens' Subscription Fund.

Balance, December 17, 1898		$35 77
Interest on bonds		220 00
		$255 77

EXPENDITURES.

Cambridge Safe Deposit and Trust Company	$4 20	
R. Herndon Company	30 00	
Houghton, Mifflin & Co.	25 00	
Library Art Club	5 00	
Little, Brown & Co.	76 50	
Prince Society	12 00	
Society for Psychical Research	5 00	
James T. White & Co.	8 00	
		165 70
Balance on hand, December 16, 1899		$90 07

Cummings Fund.

Balance, December 17, 1898	$6 38
Interest on bond	80 00
	$86 38

EXPENDITURES.

American Architect and Building News Company	$5 50	
Burrows Brothers Company	3 60	
George E. Littlefield	20 35	
Bradlee Whidden	15 00	
		$44 45
Balance on hand, December 16, 1899		$41 93

Fay Fund.

Balance, December 17, 1898	$2 22
Gift, credited to Fay fund	18 00
" " "	25 20
Interest on bond	35 00
	$80 42

EXPENDITURES

Burrows Brothers Company	77 00
Balance on hand, December 16, 1899	$3 42

APPENDIX III

GIFTS.

	V.	P.
Adams, Charles Francis. Lincoln		1
Adriance Memorial Library, Poughkeepsie, N. Y.		1
Agassiz, Alexander		1
Aguilar Free Library Society, New York, N. Y.		1
American Congregational Association, Boston		2
American Historical Association		1
American-Irish Historical Society	1	
American National Red Cross Committee	1	
Ames, Mrs. James Barr	18	
Ancient and Honorable Artillery Company, Boston		2
Andover Theological Seminary		1
Balch, Thomas Willing, Philadelphia, Pa.	1	
Bancroft, Mrs. Hubert Howe		1
Bangor (Maine) Public Library		1
Bar Association of the City of Boston	1	
Bartlett, John	1	
Benton, J. H., jr., Boston		1
Birmingham (England) Free Libraries		1
Boston, City of	2	
Boston Book Company	1	
Boston City Hospital		1
Boston Public Library	5	2
Boston Transit Commission	1	2
Bostonian Society		1
Bowdoin College Library, Brunswick, Maine		1
Brockton Public Library		1
Brookline Public Library		1
Brooklyn (N. Y.) Library		1
Brown, E R.	1	
Burbage, John, Chicago, Ill.	1	
Burlington (Iowa) Free Public Library		1
Burrage, William W.	1	
Cambridge, City of	3	1
Cambridge: —		
Associated Charities		1
Avon Home		18
East End Christian Union		2
Episcopal Theological School		2
Library Hall Association	2	7
Young Women's Christian Association	1	1
Carnegie Library, Pittsburgh, Pa.		1
Catholic Publishing Company, Boston		1
Chadwick, J. W., Brooklyn, N. Y.		1
Channing, Walter, Boston		3
Chase, Walter G., Boston		1
Chicago Banker Company		10
Chicago (Ill.) Public Library		2
Cleveland, Ohio, Board of Education		1
Concord (N. H.) Public Library		1
Coulter, J. M., Indianapolis, Ind.		1
"Cuba," New York, N. Y.		1
Dabney, Charles W., jr.		1

	V.	P.
Dartmouth College, Hanover, N. H.		1
Davis, Andrew MacFarland		1
Dayton (Ohio) Public Library and Museum		3
Depew, Chauncey M., New York, N. Y.		3
Dexter, Mary, Cincinnati, Ohio	2	
Dodge, Lucy S., Estate of	1	
Dover (N. H.) Public Library		2
Drexel Institute, Philadelphia, Pa.		1
Durrell, Oliver H.	1	
Eau Claire (Wis.) Public Library		1
Ela, Walter		1
Enoch Pratt Free Library, Baltimore, Md.		1
Everett Public Library		1
Fall River Public Library		1
Fletcher Free Library, Burlington, Vt.		1
Fogg Library, South Weymouth		1
Forbes Library, Northampton		1
Foster, Francis Apthorp	15	
Free Religious Association, Boston		1
Gallaher, J. E., Chicago, Ill.	1	
Garrison, William Lloyd, Boston		1
Gifford, William L R.	1	
Gilman, Arthur	1	
Goodale, George Lincoln		1
Goodwin, William Watson	3	
Hamilton (Canada) Public Library		1
Hampton (Va.) Institute		1
Harrison, Carter H., Chicago, Ill.	1	
Harvard University Library	7	1
Higginson, Thomas Wentworth	4	
Hoar, George F. Washington, D. C.		1
Hoboken (N. J.) Free Public Library		1
Holy Cross College, Worcester		1
Home Science Publishing Company	3	
Houghton, Mifflin & Co.	1	1
Hubbard, Phineas	1	
Huling, Ray Greene	1	3
Indian Rights Association, Philadelphia, Pa.		3
Ipswich Historical Society	1	
John Crerar Library, Chicago, Ill		1
Lake Mohonk (N. Y.) Conference on International Arbitration		1
Lancaster Town Library		1
Lane, Mrs. C. M.	1	
Lawrence Public Library		1
Lee, George H.		1
Leicester Public Library		1
Lexington, Town of	1	
Leyton (England) Public Library		1
Libbey Glass Co, New York, N. Y.	1	
Los Angeles, Cal Chamber of Commerce		1
Lynn Public Library		1
McCall, Samuel W, Washington, D. C.	4	
Macdonald, Arthur		2
McIntire, Charles J.		1
McKean, Anna H.		1
McKenzie, Alexander	1	
McNamee, John H. H.	4	
Malden Public Library		3
Manchester (N H.) City Library		1
Mason, Charles A.	1	
Massachusetts, Commonwealth of	44	3
Massachusetts Civil Service Commission		1
Massachusetts College of Pharmacy		1

	V.	P.
Massachusetts Institute of Technology, Boston		2
Massachusetts Reform Club	1	12
Massachusetts Total Abstinence Society		2
Massachusetts Universalist Convention		2
Massachusetts Volunteer Aid Association	1	
Medford Public Library	2	1
Metropolitan Park Commission	2	
Minneapolis (Minn.) Public Library		2
Möring, Mrs Anna L., Estate of		11
Mount Holyoke College, South Hadley		1
Munson, Myron A., New Haven, Ct.		1
Museum of Comparative Zoölogy	2	1
Nahant Public Library	1	
National Civil Service Reform League, New York, N. Y.		2
National Educational Association		1
New Bedford Free Public Library		1
New Church Literature Bureau, Boston	1	
New England Historic Genealogical Society		2
New Haven (Ct.) Free Public Library		1
New York Civil Service Reform Association		1
New York Public Library	1	
New York State Library School, Albany, N. Y.	2	4
Newark (N. J) Public Library		2
Newton Free Library		1
Northampton Public Library		1
Oberlin (Ohio) College Library		2
Osborne, Thomas M., Auburn, N. Y.		1
Palfrey, Miss Sarah H.	1	
Palmer, George H.	3	
Paterson (N. J.) Free Public Library		1
Peterson, John	11	
Philadelphia (Pa) Free Library		1
Piper, William Taggard		5
Porter, Edward G , Boston		1
Portland (Me.) Public Library		1
Pratt Institute Free Library, Brooklyn, N. Y.		2
Princeton University, Princeton, N. J.		1
Providence (R. I.) Athenæum		1
Providence (R I.) Public Library		1
Providence (R. I) Record Commissioners	1	
Putnam, Frederic Ward		1
Redwood Library and Athenæum, Newport, R. I.		2
Reynolds Library, Rochester, N. Y.		1
Richardson, William A., Estate of	1	
Rindge, Frederick H., Los Angeles, Cal.	1	
Robbins Library, Arlington		1
Rogers, Edward H., Chelsea		3
Rolfe, William J.	5	
St. Giles Public Library, London, England		1
St. Louis (Mo.) Mercantile Library		1
St. Martin-in-the-Fields and St. Paul Library, London, England		1
Salem Public Library		3
San Francisco (Cal.) Free Public Library		2
Sanger, George P., Boston	1	
Scranton (Pa.) Public Library		1
Simms, J.	1	
Smith, Mrs. Anna B.	1	1
Smithsonian Institution, Washington, D. C.	7	1
Society for the Promotion of Engineering		1
Soldiers' Home, Chelsea		1
Somerville Public Library		1
Sons of the American Revolution, Yonkers Chapter		1
Southbridge Public Library		1

	V.	P.
Springfield City Library Association		2
Steward, John F., Chicago, Ill.	1	
Stiles, Chester W.		3
Stone, Milton J.	10	
Sturtevant Company, B. F., Boston		1
Syracuse (N. Y.) Central Library		1
Tabor Academy, Marion		1
Taunton Public Library		1
Taylor, C. F., Philadelphia, Pa.	1	
Thomas Crane Public Library, Quincy		1
Thwing, Charles F., Cleveland, Ohio	1	
Tilton, Mrs. F. W.	2	
Torrey, Henry W., From the library of	1	
Tufts Library, Weymouth		1
Tulane University, New Orleans, La.		1
United States: —		
Agriculture, Department of		11
Bureau of Education	1	
Civil Service Commission	1	1
Geological Survey	2	
Interior, Department of	1	
Interstate Commerce Commission	5	3
Labor, Department of	3	
Library of Congress	2	2
Life Saving Service	17	
Navy Department		6
Patent Office	50	
Superintendent of Documents	4	
Treasury Department	2	1
War Department	1	
University of Pennsylvania, Philadelphia, Pa.		2
Watertown Free Public Library		1
Wells College, Aurora, N. Y.		1
Wilmington (Del.) Institute Library		1
Winthrop Public Library		1
Wisconsin State Historical Society, Madison, Wis.	1	3
Woburn Public Library		1
Worcester Free Public Library		1
Wright, George G.		2
Wright, Theodore F.	11	
Yale University, New Haven, Conn.	1	1
Yerxa, Miss Sarah	7	

Bulletins, or similar publications, have been regularly received from the following libraries: —

Boston Public Library
Brookline Public Library
Brooklyn Library
Carnegie Library of Pittsburgh
Fitchburg Public Library
Hartford Public Library
Helena (Montana) Public Library
Iowa Masonic Library, Cedar Rapids, Iowa
Lawrence Free Public Library
Library Association of Portland, O.
Lowell City Library
Malden Public Library
Minneapolis Public Library
New Bedford Free Public Library
New Haven Free Public Library
New York Public Library

Osterhout Free Library, Wilkes-Barre, Pa.
Paterson Free Public Library
Pratt Institute, Brookyln
Providence Athenæum
Providence Public Library
Salem Public Library
San Francisco Free Public Library
Scranton Public Library
Somerville Public Library
Springfield City Library
Taunton Public Library
Tufts Library, Weymouth
Wisconsin Free Library Commission
Woburn Public Library
Worcester Free Public Library.

CITY CLERK'S REPORT OF FEES AND LICENSES

OFFICE OF THE CITY CLERK, December 1, 1899.

To the Honorable, the City Council of the City of Cambridge:—

The undersigned herewith presents an account of the sums received for fees and licenses during the year ending November 30, 1899.

Auctioneers' Licenses	$52 00
Pool, Bowling Alley and Billiard Licenses	66 00
Wagon and Carriage Licenses	245 00
Intelligence Office Licenses	36 00
Junk Store and Collectors' Licenses	215 00
Pawnbrokers' Licenses	50 00
Recording Mortgages, Assignments, etc.	479 10
Marriage Certificates	492 00
Certified Copies from Records	75 25
Fees from Dog Licences	425 60
Fees from Liquor Licenses	51 00
Fees from Firework Licenses	192 00
Sundries	22 25
Total	$2,401 20

The foregoing amount has been paid into the City Treasury.

The receipts from Dog Licenses have been $5,157.00. Of this amount, the City Clerk's fee (20 cents for each license issued), amounting to the sum of $425.60, is included in the above list of fees, and the balance, amounting to $4,731.40, has been paid the County Treasurer.

Respectfully submitted,

EDWARD J. BRANDON,

City Clerk.

REPORT OF THE CITY ENGINEER

OFFICE OF THE CITY ENGINEER,
CAMBRIDGE, December 1, 1899.

To the Honorable, the City Council: —

The thirty-third annual report of the City Engineer is herewith submitted, showing the operation and expenditures of the departments of Engineering and Sewers for the year ending December 1, 1899.

OFFICE.

Ten assistants have been employed in this department the past year at various times, beside the clerk. In addition, four assistants have been employed on work for the Park Department.

The yearly summary of work done is as follows: —

FOR STREET DEPARTMENT.

Number of surveys	20
Number of street lines given	302
Number of street grades given	190
Number of streets on which paving, curb, etc., was measured	112
Number of assessments prepared	249
Number of plans or profiles prepared	8

FOR SEWER DEPARTMENT.

Number of surveys	4
Number of lines given	65
Number of grades given	160
Number of sewers measured	80
Number of sewers assessed	35
Number of sewer assessments prepared	163
Number of plans or profiles prepared	38

FOR WATER WORKS.

Number of surveys	0
Number of lines given	6
Number of grades given	20
Number of plans or profiles made	7

FOR PARK DEPARTMENT.

Number of surveys made	113
Number of grades given	246
Number of stone bounds set	0
Number of plans or profiles made	1

FOR PRIVATE PARTIES.

Number of street lines given	102
Number of street grades given	40

MISCELLANEOUS WORK.

Number of surveys at cemetery	7
Number of surveys or levels made	141
Number of grades given	105
Number of houses measured	472
Number of plans or profiles prepared	227

There are now on file in the office 5,698 plans.

FINANCIAL.

Appropriation		$11,000 00	
Expended		10,986 75	
Balance unexpended			$13 25
Receipts	$500 00		
Assessors plans		$300 00	
Expended		238 10	
Balance unexpended			$61 90

CEMETERY.

The usual work in staking out lots, paths, etc., has been done at the Cemetery. In the early part of the year it was decided to lay a drain from the pond at Island Avenue to the river, as the old drain laid many years ago was inoperative, and the consequent high water in the pond was a serious obstruction to the use of the adjoining lots.

A ditch from the river to the bluff, 380 feet long, was dug through the marsh and 700.3 feet of drain was laid from the bluff to the old drain at the westerly side of the pond, with proper inlets and connections.

At one place the drain is 19 feet below the surface. The laying of this drain was done by the sewer department at a cost of $2,380.07.

STREETS.

The following streets have had action taken upon them as follows: —

STREETS LAID OUT AND ACCEPTED, DECEMBER 1, 1898, TO DECEMBER 1, 1899.

LOCATION OF STREET.						PLAN.	
Name.	From	To	Length in Feet.	Width in Feet.	Date of Acceptance.	Made by	Date.
Albany Street	Massachusetts Avenue.	Erie Street	2,286	50	Nov. 23, 1899	City Engineer	July 25, 1899
Buena Vista Park	Richdale Avenue	end Beuna Vista Park.	180	30	June 15, "	W. A. Mason & Son	Nov. 1, 1898
Cambridge Street	N. E. cor. Kirkland St.	About 1,944 square feet taken into street	.....	.....	May 25, "	City Engineer	April 28, 1899
Carver Street	Sacramento Street	Museum Street.	496	40	June 15, "	W. A. Mason & Son	Aug. 20, 1898
Erie Street	Brookline Street	Albany Street	1,000	40	Nov. 23, "	City Engineer	July 25, 1899
Grigg Street	Putnam Avenue	Hews Street.	225	40	June 15, "	E. F. Bowker	July 1, 1897
Green Street	Sidney Street	Blanche Street.	142	40	Oct. 27, "	City Engineer	April 17, 1899
Huron Avenue	Portion discontinued, portion widened	Junction Sparks Street	.....	.....	April 21, "	City Engineer	Jan. 2, 1899
Kirkland Road	Kirkland Street	Southerly	230	30	June 15, "	W. A. Mason & Son	Aug. 15, 1896
Kirkland Street	Near Peabody St. about	1,656 sq. ft. discontinued	.....	.....	May 25, "	City Engineer	April 28, 1899
Prentiss Street	Massachusetts Avenue.	Frost Street	414	30	Dec. 31, 1898	W. A. Mason & Son	Aug. 31, 1898
Sparks Street	Portion widened	Junction Huron Ave.	.....	.....	April 21, 1899	City Engineer	Jan. 2, 1899
Wyman Street	Avon Hill Street	Westerly	160	40	Aug. 15, "	W. A. Mason & Son	June 1, 1899

Total length of accepted streets, December 1, 1898, 89.721 miles.
Total length of streets accepted from December 1, 1898, to December 1, 1899, 5,133 feet, or 0.972 miles.
Total length of accepted streets, December 1, 1899, 90.693 miles.

BRICK PAVING.

Early in the year, the question of paving some of the more traveled streets began to be discussed. As these streets did not carry the heaviest traffic and were largely residential streets, vitrified brick as a suitable paving was considered. Some doubts as to its desirability were expressed, and as experience with this material in this part of the country has been very limited, it seemed desirable to obtain more information by observation and inquiry in cities where brick had been in use for considerable periods. With this in view, the Committee on Roads and Bridges, with the City Engineer and the Superintendent of Streets, were, on June 20th, 1899, authorized to visit various cities and ascertain what had been achieved by the use of vitrified brick pavement. In accordance with this order, a trip was made to cities as far west as Canton, Ohio, and a report embodying the results obtained, made to the City Council, dated July 11th, 1899. The westerly side of Harvard Square, and Prospect Street from Massachusetts Avenue to Cambridge Street, have since been paved with brick in accordance with the recommendations of this Report.

The results obtained by the use of vitrified brick on these streets will be watched with interest. Sufficient time has not elapsed as yet to draw any reliable conclusions.

BRIDGES.

The bridges of the City, not in care of a special commissioner, have been examined, and are found to require but little more than the ordinary repairs to put them in good condition. More or less new planking and timbering will be required on some of the bridges. The two metal bridges over the Fitchburg Railroad will require some attention given to the parts immediately over the tracks. The protective covering, put on last year, should be renewed on many parts where worn by the blast from locomotives.

A much needed improvement has been begun by the Fitchburg Railroad Company at the Cambridge Station. The old wooden bridge carrying the highway over the railroad has been removed, and is to be replaced with a modern steel structure, with solid masonry floor and asphalt pavement. The gas and City water pipes are to be carried under the westerly sidewalk, while the large Metropolitan water pipe is carried on a separate bridge on the easterly side of the bridge.

SEWERS.

The length of sewers in the city has been increased by the construction during the year of 8,536.8 lineal feet, or 1.617 miles of sewer, not including the sewers now being built in Robinson and Pacific Streets.

The total length of sewers in the city is now 108.327 miles. The total cost of construction to date is $1,349,277.66.

All the sewers have been built by day labor by the Superintendent of Sewers, under the general direction of the City Engineer.

Twenty-one new catch-basins have been built at a cost of $1,390.51. In addition to these, thirty-nine catch-basins have been built on the "Clay Lands" district; the expense for their construction being paid from the special appropriation for Clay Land streets.

Also, sixty-six catch-basins have been repaired. The labor and cost of cleaning the catch-basins is increasing as the numbers increase. 7,569 loads of material were removed from 2,452 catch-basins, at a cost for the year of $6,000.50.

METROPOLITAN SEWER.

One new connection with regulator has been made with the the Metropolitan sewer at the junction of Massachusetts Avenue and Albany Street. Another connection, not yet fully completed, has been made at the junction of Albany Street and Pacific Street. The automatic registers placed at Binney Street have been continued in use during the year, and the records obtained cannot help prove useful in the future. It is found that the regulator at Binney Street has been shut the last year 606.75 hours, or about 7 per cent of the total time. A register was also placed on the tide-gate at Binney Street outlet. This was found to have been opened 248 hours, while the tide-gate at Bath Street was found to have been opened for 569[1] hours during the year.

The State tax for the year 1899 assessed to Cambridge for the maintenance and running expenses of the Metropolitan Sewer System was $21,234.15. The tax for interest and sinking fund requirements was $53,528.93.

SEWERS CONSTRUCTED BETWEEN DECEMBER 1, 1898 AND DECEMBER 1, 1899.

Location.			Construction.							Total Cost.	
Street.	From	To	Material.	Size in inches.	Av. depth of Cut.	Man-holes.	Lamp-holes.	Inlets.	Length in Feet.		
Ash	Mount Auburn St.	Southerly	Portland pipe	10	8.4	..	1	24	323.6	$591	44
††Berk'ly Pl., pr. ld.	Brattle St	Berkeley St.	Akron pipe	10 and 8	10.4	3	...	43	790.5	7,325	85
Berkeley	Berkeley Pl.	Easterly	Akron pipe	8	8.8	3	...	33	489.4	*	
Berkshire	Plymouth St.	Southerly	Portland pipe	10	7.7	1	...	8	141.2	130	64
Bradbury	Sparks St.	East'ly and South'ly	Akron pipe	10 and 8	6.9	1	1	24	309.5	479	15
Brattle	Willard St.	Westerly	Akron pipe	10	11.0	2	...	13	210.8	*	
Buena Vista Park	Richdale Ave.	Southerly	Akron pipe	10 and 8	9.2	1	...	16	233.8	252	02
Chatham	Dana St.	Easterly	Akron pipe	10	7.9	..	1	8	129.8	136	61
Columbia	End of old sewer S'ly	Near Market St.	Akron pipe	10	7.2	1	...	6	61.9	83	74
§§Cushing Avenue and private lds.	End of old sewer, W'ly. and N'ly	Cushing Court	Portland pipe, Concrete and Brick	18 and 22x28	11.3	1	...	31	416.2	5,481	14
Cushing Court	Angle, E'ly	Cushing Street	Portland pipe	8	8.7	..	1	16	210.8	†	
Cushing Court	Angle	May St.	Concrete and Brick	20x22	9.7	1	...	24	314.0	†	
Dickinson	Moore St.	Clark St.	Akron pipe	8	7.8	1	1	14	183.4	151	53
Erie	Waverly	Westerly	Akron pipe	12	5.4	..	...	17	227.4	191	63
Fairview Ave	Oxford Ave.	Westerly	Akron pipe	12	8.2	1	1	13	169.7	†	
George	Clay St.	Montgomery St.	Portland pipe	10	8.1	..	1	18	243.6	152	79
Herbert	Richdale Ave.	Southerly	Portland pipe	10	8.5	1	1	12	191.0	188	51
Lawn Court	May St.	Oxford Ave.	Concrete and Brick	18x20	7.1	1	...	24	384.9	†	
Lawn	May St.	Cushing St.	Akron pipe	12 and 8	8.0	1	1	32	455.9	†	
¶¶Mass. Avenue	End of old sew'r E'ly	Vassar St.	Portland pipe	15		2	...	4	194.5	3,251	81
Main	End of old s'w'r W'ly	Near B. & A. Br. R.R.	Akron pipe	15 and 10	8.9	1	1	31	388.4	985	06
May	Cushing Court	Lawn Court	Concrete and Brick	20x22	6.1	2	...		290.4	†	
May	Lawn Court	Northerly	Portland pipe	12 and 10	8.5	1	1	33	432.7		
Mt. Auburn	Old Bath St. sewer	Ash St.	Portland pipe	12	9.2	1	...	2	69.4	§	
Oxford Ave.	Fairview Ave.	Southerly	Akron pipe	15 and 8	8.7	1	1	21	305.7	†	
Pearl	End of old sew'r S'ly	Franklin St.	Akron pipe	10	5.8	..	1	6	84.1	269	16
Pearl	End of old sew'r N'ly	Franklin St.	Portl'd and Akr'n pipe	10	7.5	..	1	4	69.8		
Saint Paul	Prospect St.	Westerly	Portland pipe	18, 12 and 10	7.7	2	2	20	504.9	558	79
Traymore	Eustis St.	Harris St.	Portland pipe	10	7.2	1	..	10	215.0	189	18

Vassar	Massachusetts Ave.	Northeasterly	Portland pipe	8		..	1	6	91.1	¶	
Vineyard	May St.	Easterly	Portland pipe	8	8.6	1	...	12	187.2	†	
Washington	Windsor St.	Cherry St.	Akron pipe	8	5.9	..	1	12	175.1		93.59
Waverly	End of old sew'r N'ly	Erie St.	Portland pipe	15	5.9	..	...	2	41.0	**	
Willard	Foster St.	Brattle St.	Akron pipe	12	10.4	2	...	31	475.2	*	
Wood	Sheridan St.	Walden St.	Akron pipe	15 and 8	7.0	1	1	24	338.4		344.75
Yorktown Court	Yorktown St.	Northeasterly	Portland pipe	8	7.3	..	1	8	132.0		491.94
Yorktown	Seven Pines St	Massachusetts Ave.	Portland pipe	10 and 8	8.0	1	1	34	481.9		
						35	21	636	9,964.2		$21,349.33

* For cost, see Berkeley Place and private lands.
† For cost, see Cushing Avenue and private lands.
§ For cost, see Ash Street.
¶ For cost, see Massachusetts Avenue.
¶¶ Includes cost Vassar St. sewer, also $1,533.38, cost of regulator at Albany St.
** For cost, see Erie Street.
†† Includes cost of Willard St., Brattle St. and Berkeley St. sewers.
§§ Includes cost of Cushing Ct., Fairview Ave., Lawn Ct., Lawn St, May St., Oxford Ave. and Vineyard St. sewers.

SEWERS RECONSTRUCTED BETWEEN DECEMBER 1, 1898 AND DECEMBER 1, 1899.

Location.			Construction.							Total Cost.
Street.	From	To	Material.	Size in inches.	Av. depth of Cut.	Man-holes.	Lamp holes.	Inlets.	Length in Feet.	
Harvard	Norfolk St.	Inman St.	Concrete and Brick	28x30 and 24x28	8.3	3	...	106	1180.9	$5,532.15
Prospect	Harvard St.	Broadway	Concrete and Brick	18x20	7.2	1	...	23	435.5	
						4		129	1626.4	

The cost of care and maintenance of regulators and tide-gates in this city has been $1,546.74.

IMPROVED SEWERAGE.

In order to carry out the recommendations contained in the Report of the City Engineer, made on May 20, 1898, suggesting certain changes in parts of the present sewerage system of the City, application was made to the Legislature, and on March 24, 1899, an act was passed (slightly amended by Act, dated June 3, 1899), granting authority for the City to issue bonds to an amount of $400,000.00. Under authority given by this Act an order was passed August 10, 1899, making a loan for $100,000.00 for improved sewer construction.

Before the work of construction was begun it was deemed best to secure the services of an expert Civil Engineer, to examine the plans and proposed constructions and report thereon. The services of Howard A. Carson, C. E., formerly Chief Engineer of the Metropolitan Sewerage Commission and now Chief Engineer of the Boston Transit Commission, was secured by His Honor, the Mayor. The entire Metropolitan Sewerage System was constructed under Mr. Carson's direction, and he was thoroughly familia with the sewerage problems of this vicinity. His report will be found appended to this.

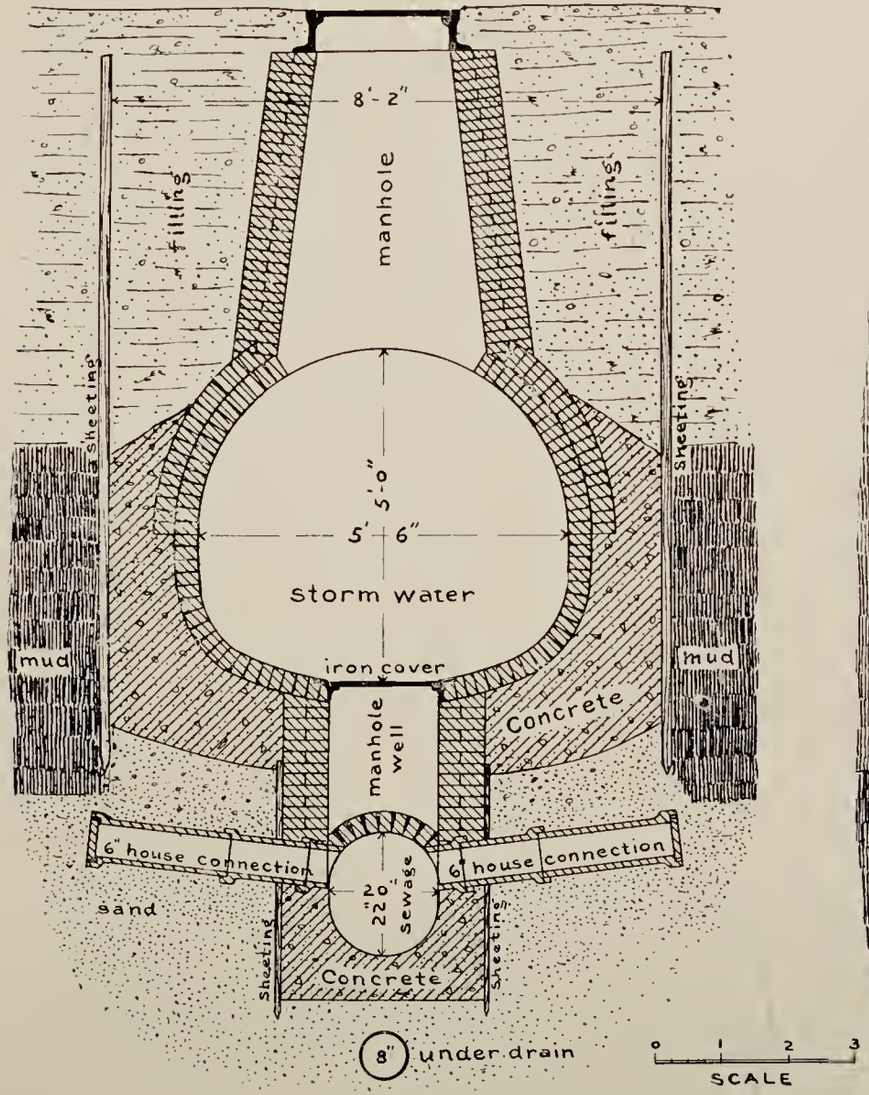
As the section demanding the most immediate attention was that known as the "Sidney Street Section," work was begun in August on the construction of sewers in Robinson and Pacific Streets, — which are to form the outlet for the district. As the season has been favorable good progress has been made; about 2,500 feet of the sewer having been built beside the regulator chamber at the junction of Albany Street and a large tide-gate chamber near the Esplanade.

The storm sewer in Robinson Street is built of a size equal to six feet in diameter and discharges into Charles River. The house or sanitary sewer is built in connection with it only of much smaller dimensions, and runs in the opposite direction, discharging into the Metropolitan sewer, through the regulator, at Albany Street. Under these sewers was laid a pipe or under-drain for taking away the water during construction.

The bottom part of the storm sewer is made of concrete with a brick lining, the upper part or arch is of brick laid in Portland cement. The construction of these sewers is plainly shown by the diagram and views accompanying. It is intended next year to extend the storm sewer through Brookline Street, from Pacific Street to Massachusetts Avenue, and probably through Douglass Street to Austin Street; also, in Sidney Street, from Pacific Street to Pilgrim Street, — relieving the old sewer there.

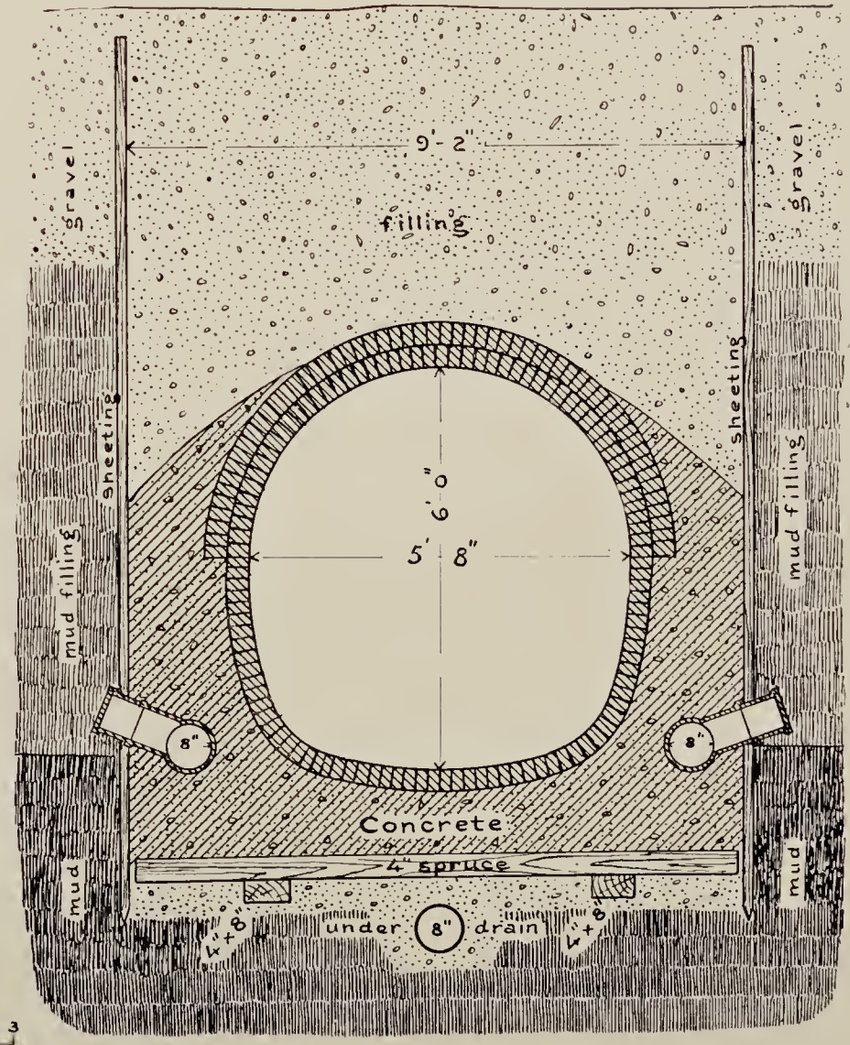
SECTION OF SEWER IN

PACIFIC ST. NEAR ALBANY ST.



SECTION OF SEWER IN

ROBINSON ST. NEAR AMHERST ST.



The house or sanitary sewer will, at the same time, be carried through Sidney, Green, Franklin, Auburn, Pilgrim, Pacific and Brookline Streets. A loan of $100,000 was authorized for this work, and it is expected that the work can be completed within that sum.

HARVARD AND PROSPECT STREET SEWERS.

Owing to the paving of Prospect Street with vitrified brick, having a concrete base, it became necessary to put all sewers and connections in good repair. The sewer between Harvard Street and Broadway was small and shallow, and complaints had been received of flooded cellars. The sewer in Harvard Street was very shallow at this point as well as small. It was therefore decided to rebuild the sewer in Harvard Street from Norfolk to Inman Streets, and also in Prospect Street from Harvard Street to Broadway. Branches and connections were also put in on Prospect Street where it was thought they might be needed, so that any necessity for opening the street for the purpose of connecting with the sewer would be obviated.

Pearl Street, from Massachusetts Avenue to Allston Street, was also treated in the same way. All gas and water pipes and connections were also put in good repair, and where new ones seemed likely to be called for in the future, they were laid.

FINANCIAL.

CONSTRUCTION GENERAL.

Appropriation		$24,700 00	
Expended		23,827 69	
Balance unexpeneded			$872 31
Receipts from assessments	$8,791 63		

MAINTENANCE.

Appropriation		$18,400 00	
Expended		18,179 35	
Balance unexpended			$220 65
Receipts	$389 49		

IMPROVED SEWERAGE.

Appropriation (met by loan)		$100,000 00	
Expended		42,989 24	
Balance unexpended			$57,010 76

WATER WORKS.

Water has wasted over Roberts Dam 175 days during the year, and was below the crest of the dam 190 days. The highest water reached March 6, 1899, was 1.25 feet above the crest. Elevation 82.25. One hundred nineteen million, nine hundred thousand gallons passed the dam that day. On July 8, 1899, the lowest water was reached, 5.70 feet below the crest. Elevation 75.30–

Water wasted over the dam 175 days as follows: —

December, 1898	1,154,000,000 gallons
January, 1899	1,260,800,000 "
February, 1899	616,500,000 "
March, 1899	2,421,400,000 "
April, 1899	1,421,900 000 "
May, 1899	94,900,000
June, 1899	
July, 1899	
August, 1899	
September, 1899	
October, 1899	
November, 1899	

Total amount passing the dam during the year, 6,969,500,000 gallons.

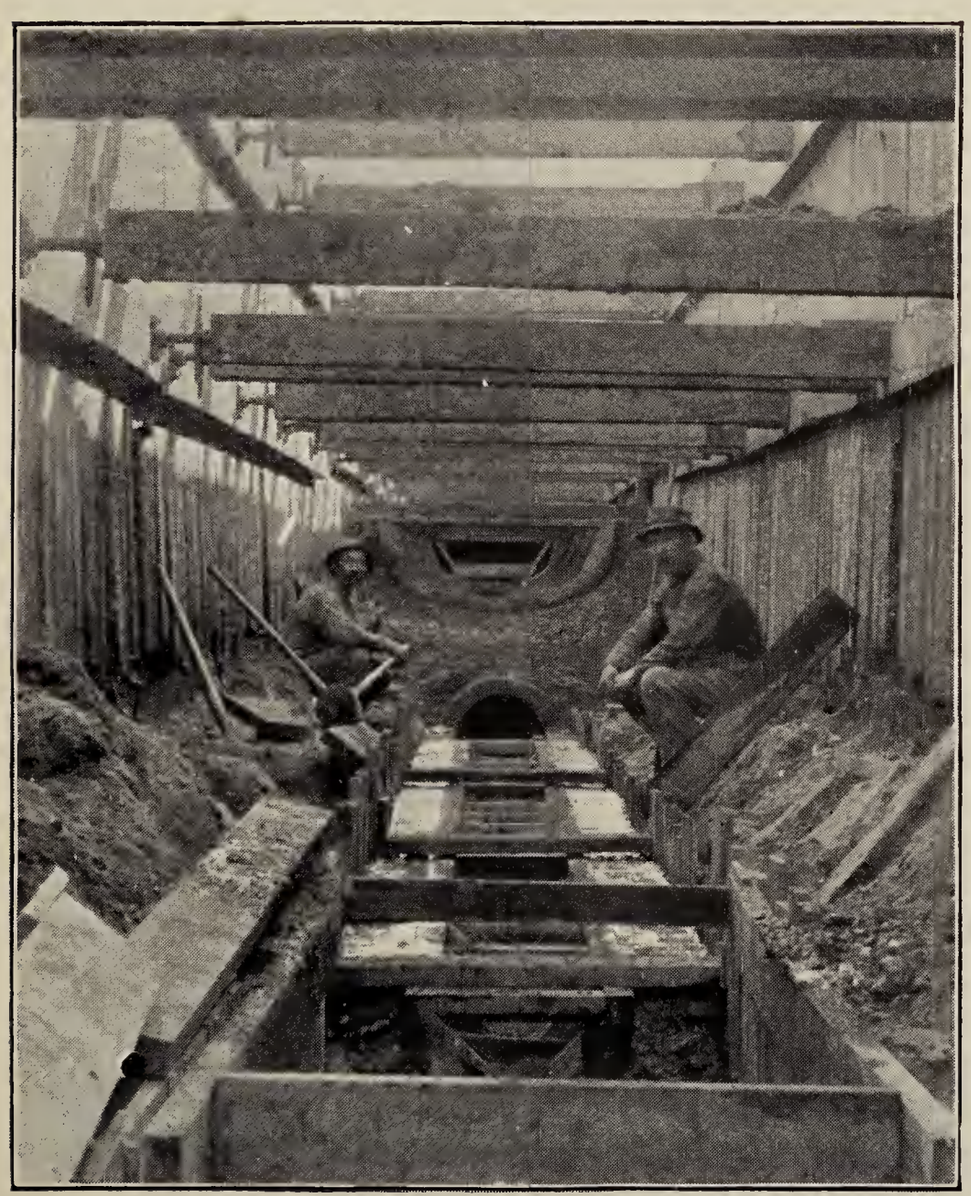
At Fresh Pond the highest water was on Jan. 27, 1899, at elevation 17.15– The lowest water, Sept. 19, 1899, at elevation 13.17–

HOBBS BROOK BASIN.

The highest water at the Hobbs Brook Basin was March 20, 1899, at elevation 181.27– November 30, 1899, the lowest elevation was reached at 175.93– The unusually dry season has demonstrated the value of the addi. tional storage basin at this basin. Except for the water held in store there, the condition, as regards water supply in the city, would have been serious.

TABLE; SHOWING COMPARISON, BY MONTHS, OF NUMBER OF DAYS IN WHICH RAIN FELL, AND TOTAL PRECIPITATION AT ROBERTS DAM, HOBBS BROOK, FRESH POND, AND HARVARD OBSERVATORY, FROM DECEMBER 1, 1898, TO DECEMBER 1, 1899.

Point of Observation.	Rainy days and Precipitation.	1898.	1899.											
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept.	Oct.	Nov.	Total
Roberts Dam.	No. of days in which rain fell.	6	5	11	16	3	9	6	8	5	10	8	7	94
	Total Precipitation.	3.10	4.43	4.83	4.78	1.49	1.06	3.10	3.03	3.66	5.25	1.79	4.44	44 96
Hobbs Brook.	No. of days in which rain fell.	4	5	14	16	4	10	7	8	7	11	11	9	106
	Total Precipitation.	1.83	2.40	4.49	5.22	1.30	1.34	3.15	3.23	3.17	4.08	1.83	3.50	35.54
Fresh Pond.	No. of days in which rain fell.	6	6	12	19	5	6	7	7	5	7	11	5	96
	Total Precipitation.	2.00	3.85	3.99	5.94	1.32	0.77	3.17	3.12	3.21	4.63	3.08	2.20	37.28
Harvard Observatory.	No. of days in which rain fell.	9	8	12	17	4	5	7	6	10	10	11	6	105
	Total Precipitation.	2.53	4.96	5.41	6.67	1.37	1.46	2.90	2.49	2.59	4.31	1.55	3.56	39.80



Pacific Street Sewer, Construction near Albany Street.

Robinson Street Sewer, Construction near Amherst Street.

PARK DEPARTMENT.

The engineering work performed in connection with the Park Department during the past year has been largely in completing contracts already made, and in setting out the work of improving the various sections which were to be finished by grading, loaming, planting, etc.

The important work of filling the Esplanade and adjacent private flats near Main Street was completed by the contractors about April 1, 1899.

The final estimates of this work and its cost are as follows: —

Main Street (narrow strip)	1,319 sq. ft. filled.		$131 90
City Wharf lot	37,282	" "	3,728 20
F. H. Rindge lot	10,635	" "	1,063 50
B. F. Brown lot	33,090	" "	3,309 00
Esplanade (not including area occupied by wall and ballasting)	426,300	" "	49,881 75
			$58,114 35

Of the above amounts it has been agreed that one-half the cost of filling the "Brown" lot shall be paid by the owner.

The Esplanade has been substantially completed in grading and surfacing from the portions treated in 1898, and extending easterly for about seven hundred and thirty feet. Considerable work has also been done in finishing the Esplanade as extended westerly for a distance of about nine hundred and twenty feet. In connection with this grading of the Esplanade, thirty-six catch-basins have been built to take off the surface water, and sixteen hundred feet of drain pipe for outlets to these catch-basins have been laid.

A single roadway on the northerly side of the Esplanade has been graded and opened for travel from a point near Main Street, at West Boston Bridge, to the end of the completed section, a distance of about twenty-five hundred and forty feet. There has been a total length of roadway completed at the Esplanade of seven thousand seven hundred and twenty feet, and about seven thousand nine hundred feet of walks. In this connection also three hundred sixty-four shade trees have been set out.

The dyke mentioned in my last report as partially completed was finished by contractors Nawn and Brock, on May 13, 1899. A change was made in the location of the dyke at its easterly end to allow for the proposed location of a bath house near Brookline Street, so that some delay and increased cost was occasioned. The total cost of the dyke, 1,151.6 feet long, including drainage ditch, sheet piling, and extra work, was $2,298.63.

The park roadway, between Magazine and Brookline Streets, about 1,200 feet long, partly filled at various times before, has been constructed and graded substantially to a width of eighty feet. Nineteen thousand eight hundred and twenty-one cubic yards of material were furnished by Mr. William B. Mullen, for this work, at a cost of $11,496.18.

In all these fillings, great difficulty has been experienced in keeping the surfaces to grade, owing to the constant tendency to settlement. The marsh mud being in most cases deep and soft, when loaded even with a small amount of filling a settlement of the surface is at once noted. When loaded with ten feet of filling a settlement of as great as 3.5 feet has been observed. Of course, under these conditions, it is impossible to keep the surfaces of the filled tracts at the proper grade for any length of time.

At Captain's Island, where the old State magazine has been made into a bath house, and a bathing beach constructed, 2,947 cubic yards of gravel, dredged from the river, were used in making the beach, at a cost of $975.00.

Plans were made for enclosing the Washington Elm with a substantial granite curb. This was done and the enclosed area dug up and filled with loam and seeded.

Various plans and estimates of a miscellaneous character have also been prepared for contemplated work; plans showing the proposed filling between the end of the sea-wall at the Esplanade and Brookline Street; plans showing proposed filling and change in sea-wall line between Brookline Street and River Street; also, plans for proposed change in the line of Charles River, between Boylston Street and the Cambridge Cemetery. Copies of these last two plans were also filed with the War Department, at Washington, D. C. Plans and descriptions have also been prepared for the taking of a strip of land to be used for Park purposes on the river bank, across land of the Cambridge Hospital.

Sundry plans have also been made for grading yards at the Latin and English High and the Peabody Schools.

Four assistants have been employed on park work during the season, two during the entire year.

Respectfully submitted,

L. M. HASTINGS,

City Engineer.

TABLE SHOWING RAINFALL AT ROBERTS DAM AT WESTON, HOBBS BROOK IN WALTHAM, THE FRESH POND PUMPING STATION (CAMBRIDGE WATER WORKS), AND AT HARVARD OBSERVATORY, CAMBRIDGE, DECEMBER 1, 1898, TO DECEMBER 1, 1899.

	1898. DECEMBER.				1899. JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.				JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				
DAY OF MONTH.	Roberts Dam.	Hobbs Brook.	Fresh Pond.	Harvard Observ.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	DAY OF MONTH.
1				.38	.35	.50		1.02		.06		.09										.65	.38													.37			1.50	.95	.11	1.48	1
2															.73						.50			.30									.27			.61	.60	.06	.40					.26	.21			2
3										.80	.80		.65	.65	.08	.80																					.08	.07		T							.83		3
4			.76						.77			.85		.08	.43	.05																			.20		.06	.05							1.00	.85		.83	4
5	1.00	77		.80				T		.07	.05		.99	.40	.20	.45																				.22													5
6							.95	.15	.10	.20	.13	.05	.21	.19	.16	.05																											.45							6
7					1.02	.56		.87	.27	.40	.31	.18	.63	.25	.48	.45			.63								.33				.02								.01			.54	.50		.49					7
8									.38	.45	.27	56	.10		.02	.15	.83	.57		.73						.50		.34				1.18					.02	.04		T			.16							8
9									.37	38		.41																	1 25	1.40	.13	.93								T	.25	.15	.11	.22					9
10																													.15	.20		.04			1 60						.16	.18		.04					10
11															.07							.08											1.26	1.10	.07	1.24			.16						1.13		11
12	.45		.35	T							.39	.14		.04	.02			.09	.11		.08		.04										.03	.04		.01	.12	.16		.15					1.45	1.30		1.10	12
13		.30		.43			.14			.70	1.28	.78	.12		.02	.05	.13		.03	.10			.10						.02																			13
14							.19	.13	.48	.75		1.61		.03	.75	T		.04		.02	.15			.11																									14
15					.48	41		.29	1.40				.90	.04											.41	.04	.54																	.02	.07			15
16							.80				.19			.72		.84			.53				.06		.60	.66		.45			.09												.08	.06		.07	16
17					.86	.35		.84	.27	.32	.04	.24					.53	.60		.52	.07	.20							.06	.06																			17
18									.50	.02	.36		.80		.86							.05																			.40	.20							18
19			.19							.04		.34	.91	.20	.71	1.19					.07	.06		.90																1.36		.24	.33		.19			.06		19
20	.15		.18	.21									.85	.95		.53						.07	.05				.71									.76	1.30	2.15	3.01		.11	.04	.05	.08	.03		.05	20
21		.33	.02	.18						.03					.02						.08	.13	.14	.11	.76	.79		.65								2.00	.60	.52	.16	.20	.12	.11	.05					21
22	.38		.50										.48	.40	.78	.04					.09			.04										1.65	1.26	.01	64	.45		.45						.02		.03	22
23	.58	.43		.50									.33	.70		.60																	2.30		.08	1.05						07	.05	.04	.07	.06			23
24							1.71						1.00			.78			.02						.16		.19									.03	.05		.02					.09	.05					24
25					1.72	.58		1.66							.11											.20	.08	.13			.75	.02	.04	.04		.04												25
26											.13		.25	.25	.13	.24									.06	.11		.07	.64	.37	.82	.81		.02		T	.16	.15		.13									26
27									.20	.27	.04	.16				.05											.12		.63	.92	06	.61						.06		.01				.05						27
28									.09						.25						.01	.05					1.20	.05	.19	.16										.07	.10	.15	.04						28
29				T									.45	.22		.40					.01	.02			1.11	.85		1.21			.09					T					.08	.27	.08							29
30															.12							.03							.09	.10		.08				T	.80	.60			.24	.14		.15						30
31	.54			.03			.06						.11	.10																												1.29							31
Total,	3.10	1.83	2.00	2.53	4.43	2.40	3.85	4.96	4.83	4.49	3.99	5.41	8.78	5.22	5.94	6.67	1.49	1.30	1.32	1.37	1.06	1.34	.77	1.46	3.10	3.15	3.17	2.90	3.03	3.23	3.12	2.49	3.66	3.17	3.21	2.59	5.25	4.08	4.63	4.31	1.79	1.83	3.08	1.55	4.44	3.50	2 20	3.56	

REPORT OF THE BOARD OF CEMETERY COMMISSIONERS

CAMBRIDGE, December 1, 1899.

To the Honorable, the City Council: —

The Board of Commissioners of the Cambridge Cemetery respectfully submits its forty-sixth annual report, the same being for the year ending November 30, 1899.

The amount appropriated at the beginning of the year was	$21,500 00
The total amount of expenditures was	19,910 23
Balance of appropriation unexpended	$1,589 77

For a detailed account of expenses, reference is made to the City Auditor's Report.

The receipts of the year have been as follows: —

Burial and tomb fees	$4,521 05
Care of lots	3,003 26
Sale of lots and graves	5,335 05
Foundations, brick graves, etc.	1,178 65
Interest on Cemetery Fund	1,656 72
Sundries	439 17
Total	$16,133 90
The estimated revenue by this Board was	19,500 00
Decrease of revenue over estimate	$3,366 10

As the City Council had estimated the revenue of this Department at $21,500.00, the apparent deficit in the returns amounts to $5,366.10.

The receipts of the Cemetery have been the least of any year in the last decade, due almost entirely to the small amount received for sales of lots; the loss from this source alone, as compared with the receipts of 1898, being almost $3,300.00.

The number of interments increased about one hundred, and the amount received for burial fees shows a corresponding increase over the year 1898 of about $700.00.

This reduction in the general receipts is of course unusual, and could not well be anticipated. On the contrary, it had been confidently expected that the season of 1899 would close with a decided increase in the amount received for sales over any previous year.

The expenses have been rather below the average of recent years, as will be readily noted if the cost of the construction of the sewer from the Pond to Charles River should be deducted from the total expenditures. This result has been accomplished by the strong effort made to curtail expenditures in all lines, so as to leave a substantial balance with which to commence the filling of the pond. Owing to the uncertainty of the cost of the sewer, — rendered uncertain because of a lack of knowledge of the physical conditions to be encountered, — no attempt was made to use any of the funds for special purposes immediately after the appropriations were made in February last, as the first and most important work was the construction of the drain.

When this work was completed, the open weather was not propitious for work requiring heavy teaming, and so the financial year has closed without an opportunity to make use of all the appropriation. This is to be regretted, and it is earnestly hoped that an appropriation will be forthcoming at once, so that the filling of the Pond may be carried on during the winter season.

In general, the Cemetery has presented a creditable appearance during the season. Several of the avenues have been surfaced and gutters laid, although a few should be regraded and a more durable surface made, more especially River Avenue along the bluff, Meadow, Beach, Island, Central and Oak Avenues and a portion of Summit Avenue, which have never been properly surfaced, and are now requiring constant attention to be retained in good condition.

The Superintendent of the Cemetery strongly advises the erection of a guard rail along Meadow Avenue, from the old receiving tomb to Prospect Avenue, and the Board indorses the suggestion.

The Superintendent's report presents statistics of the work of the year from which the following facts are taken: —

Number of lots prepared	232
Estimated value of the same	$17,698 00
Number of lots ready for sale	387
Estimated value of the same	$53,406 00
Number of single graves ready for sale	555
Estimated value of the same	$9,114 00
Number of interments	644
Number of removals to other cemeteries	10
Number of interments in Cemetery (total)	22,840
Number of burials (Overseers of Poor)	44
Number of lots sold	39
Number of graves sold	24
Average number of men employed	17

Since its opening there has always been manifest a desire on the part of non-residents to purchase burial lots in the Cemetery. At times this desire has been so prominent, and so many requests have been made

for the right to purchase, that the Commissioners for the time being have felt compelled to pass regulations tending to prevent the sale of lots to non-residents. From being a temporary expedient, this refusal to sell gradually became a settled policy, and was finally engrafted in the conditions of the deed given by the City.

But while this prohibition had a partial effect in limiting the sale of lots to residents of Cambridge, there have been many evasions by means of transfer, and this Board finally felt compelled to adopt as a condition of the deed to be given by the City the following provision, which is the eleventh condition of the deed, viz. : —

"No person not a resident of Cambridge, other than the heirs-at-law or devisees of the deceased proprietor, shall be interred in said lot without the consent of the Commissioners of the Cemetery."

By restricting the right of interment practically to residents, it is hoped to do away with the pernicious practice followed by many residents of purchasing lots and afterwards deeding them to non-residents.

Some such course is rendered absolutely necessary by the rapidly diminishing amount of territory at the disposal of this Board.

SOLDIERS' AND SAILORS' LOTS.

In agreement with our expectation, as mentioned in our last report, the method of marking the graves in the new lot on Summit Avenue was determined early last Spring.

After careful consideration, the Board decided to mark each grave by a small granite tablet, on which was inscribed the name of the deceased, the service, and the years of birth and death. The design chosen met with almost universal approval and justifies the course taken by the Board. The glaring effect produced in the old lot by the placing of so many large marble tablets in close proximity is happily absent in the new one.

The whole lot has been regraded and turfed, and now presents an attractive appearance. There were five (5) interments during the year, making a total number of twenty-three (23). The cost of tablets, grading and care was $565.00.

The old lot on Prospect Avenue must soon receive particular attention. Many of the stones have become loose and some are crumbling away — most giving evidence of the approach of the time when the changing or renewing of the tablets will have to be considered. The customary good care has been given this lot, however, at an expense of $85.00.

No interments were made in this lot.

PERPETUAL CARE.

Despite the general decrease in the amount of receipts in almost all the divisions of Cemetery work, one detail merits a passing notice by reason of its exceptional standing. For years this Board has urged upon lot owners the good features of the perpetual care method of caring for lots or graves, and each recurring season shows a steady increase in the number of lots placed under the perpetual care of the City authorities.

Twenty-six proprietors have chosen this method during 1899, the largest number in any single year for a decade, and the sum deposited with the City was $3,329.20, bringing the total amount to the credit of the fund of $46,612.98, representing 341 lots.

If lot owners would only examine this system in detail, we have no doubt of an immediate impetus in this direction.

METROPOLITAN PARKWAY.

During the past year, the Metropolitan Park Commissioners have taken for park purposes a tract of marsh lands averaging about 150 feet in width along the banks of Charles River.

The Cemetery formerly possessed about 13.4 acres of marsh lands, but the taking aforesaid has reduced their possessions to about six acres of doubtful utility for burial purposes. These marsh lands are practically at the elevation of high tide in the river, and to fill them to a proper grade for burial uses would be a very expensive undertaking, even if such a course would be advisable.

To illustrate the difficulties to be expected, we quote from a communication from City Engineer Hastings to this Board, published in the last report. Mr. Hastings said: —

"In order to render this suitable for burial purposes I have estimated that eight feet of clean filling will be required, and that on the lots in addition, one foot of loam will be required. This filling is rendered still more necessary by the fact that there is something like twenty feet of marsh mud, which is soft and liable to a considerable settlement. Underneath this marsh mud soundings seem to show a soft clayey material. There is a question in my mind whether it will be safe to place so much filling on this soft material, especially as the river has recently been dredged to a considerable depth. *Unless the shore of the river is heavily loaded with gravel or ballast it would not be unlikely that a movement of the marsh and filling together might take place toward the river.* I had a case very similar to this on the filling on Mt. Auburn Street, opposite the Longfellow gardens, where a settlement of from six to eight feet took place in one night, accompanied by a movement of the filling material and marsh toward the river. A wooden bulkhead was found to be necessary at this place to restrain this tendency.

Whether the Metropolitan Park Commission will so construct a roadway and a beach on the river, so as to render it safe to place such a heavy load upon the marsh land in the rear, I am not informed, but think it very doubtful. I have prepared an approximate estimate of the cost of filling the area behind the suggested parkway, which is as follows: —

Filling 291,200 square feet (8 feet deep), equals 86,280 cubic yards at 60 cents	$52,000 00
Loam, 8,000 cubic yards at $1.00	8,000 00
Total	$60,000 00

To this should be added the cost of labor, grading and preparing the lots and surfacing the avenues and paths."

Thus it would appear to be inadvisable to attempt the recovery of these lands at present, although it might be wise to do some preliminary filling, when the Commonwealth has completed its task of improving the river banks, to test the question of the stability of the marsh bottom.

This, however, is a problem for the future, and need not be considered here.

There is one portion of the lowlands which may be rendered suitable for burials without too great cost. The part of the cemetery between Winchester and River Avenues and the Watertown line appears to be well adapted to the use of a public lot, and as the Metropolitan Commissioners will probably take some steps towards the construction of its roadway and beach at this point during the coming season, the City should be in a position to co-operate with the Commonwealth in the filling of this section.

We believe that such action will be a measure of real economy to the City, as a more favorable contract can probably be made jointly than by the City alone.

This area is needed, too, at this time for a public lot, which must be laid out in the ensuing season, and no portion of the Cemetery is so available and well adapted to this purpose.

This Board would therefore recommend that the money received from the Commonwealth for the lands taken for its park purposes may be appropriated for the filling of this Section.

In the negotiations occasioned by the taking of the Cemetery lands by the Commonwealth, an arrangement was perfected for the transfer by the Commonwealth to the City of two small pieces adjoining our territory for an equal amount of marsh lands of the City which had already been taken by the Commonwealth. The details have been satisfactorily agreed upon, and the papers are now in course of preparation.

POND AND OUTLET.

In the last report of this Board, special and urgent attention was called to the pond on Island Avenue and its outlet.

Owing to the conformation of the territory, and the diversion of the contiguous land from its original uses, the pond has become practically a cesspool, to receive and hold all the drainage of that portion of the Cemetery, and this without adequate means of cleansing. The result has been for years unwholesome and disagreeable to the view, each succeeding year tending to aggravate the unpleasant conditions, until the purifying of the pond, with a suitable provision for its continued cleanliness, has become an actual necessity.

Flushing the pond was of no avail, as there was lack of a proper outlet, and the inflow of water served to disturb the accumulations, and was of value only in providing a means to cover the deposits temporarily. When, by absorption or otherwise, the surface water had disappeared, there still remained the old condition of things to be again similarly remedied.

City Engineer Hastings' suggestion of a sewer to drain into Charles River seemed to be the wisest solution of the difficulty, and this Board accordingly recommended this course to the City Council, and requested an appropriation of $2,500.00 to execute the work. This appropriation was granted by the City Council, and the sewer was constructed under the direction of the City Engineer, in a most thorough manner, at a cost to this Department of about $2,800.00, including the expense on account of the rebuilding of Island Avenue and the repairs to lots which had been disturbed during the progress of the work.

In the building of this sewer, the probability of the future disuse of the pond was not overlooked, and the sewer was so built as not only to drain the pond but also to carry away the surface water of most of the territory which hitherto has drained into it.

The total length of the sewer is 700 feet, the excavations in some places being made to a depth of twenty feet.

As was anticipated, the assent of the Metropolitan Park Commissioners to drain through the lands controlled by them along the river front was readily obtained, and the sewer empties directly into Charles River, the flow of water being regulated by an automatic tidal gate, which by closing, prevents the flooding of the sewer at high tide by tide water.

No work of recent years has been so important to the cemetery for sanitary or æsthetic reasons, and in behalf of the community this Board testifies its appreciation of the prompt action of the City Council in affording the means for effectual relief.

Even under the present satisfactory conditions, however, the pond can never realize the expectations which caused its creation. By careful flushing, it is possible to prevent it from becoming positively obnoxious to the senses, but to secure the best results it should be drained and thoroughly cleaned at intervals.

This will necessitate an expense which does not appear to be advisable, and in the absence of some inexpensive means of permanent improvement, the filling of the pond seems to this Board the most feasible thing.

Especially is this idea to be recommended as, by proper filling, the amount of land reclaimed would be about an acre in area which could be laid out into desirable lots. Situated in the heart of the Cemetery, in the most beautiful location, these lots would undoubtedly command a large price, more than sufficient to eventually compensate for any expenditure that may be made.

In consultation with the City Engineer, he agrees with the proposition to utilize this area for burial purposes, and has submitted an estimate of the probable cost at $15,100.00, for filling and surfacing.

This Board would be pleased to request an appropriation sufficient to complete the work, but feels that possibly it might be better to spread the cost over two years and so urgently recommends an immediate appropriation of $8,000.00 to commence the filling during the cold weather.

As heretofore stated, work of this character, which will require heavy continuous teaming, should be carried on when the roadways are frozen so as to reduce the liability of serious damage.

At such a time, too, the pond itself can be filled to better advantage, as the soft muddy bottom has been hardened and is in better condition to receive the clean filling.

Reference is made to a communication from City Engineer Hastings, in the last report of this Board, for more detailed information on this matter.

WARD ONE BURIAL GROUND.

The neat and attractive appearance of this, the oldest burial ground in Cambridge, and one of the most ancient in the country, is gratifying testimony to the care which has been bestowed upon it, and its good appearance has been still further increased by the change which has been made in the arrangement of the shrubbery. A few years ago the delapidated appearance of the buildings surrounding this ground caused the Commissioners to consider some means of screening them from view, and shrubs were so planted that in a short time this result was accomplished. The growth, however, has been greater than was desired, and the Superintendent removed much of it with a great gain in the appearance of the grounds.

For several years the Commissioners have felt that the existence of this old burial ground entailed certain responsibilities upon the community, and especially upon the City as its custodian.

Realizing the necessary decay that must overcome all things in time, an effort has been made in years past to keep the ground and its appurtenances in good condition, to preserve as long as possible its distinctive features. All the work, however, has been conducted hitherto with a view to presenting a well-groomed appearance, because it was felt that this was about all that could be accomplished.

The chairman of the Board, with Commissioners McNamee and Bertsch, were recently appointed to make a close examination of the ground, its tombs and monuments, with a view to ascertaining their true status.

This Committee submitted the following report: —

"Your Committee on Examination of the Ward One Burying Ground would respectfully report the following conditions: —

The impression gained on a view from the street is that the grounds are exceptionally clean and well cared for, and that, generally speaking, everything looks well for a cemetery as old as this. But on closer examination, we find that the old tomb in the south-west corner is very much out of repair, and if not attended to at once, must fall in ruins. The brick work is bulging on all sides, and the frost has heaved the stone caps and entrances, while the mortar has crumbled and fallen away completely in many places.

We also find that private parties have fenced in part of the land in which one of the tombs is situated.

We find that very many of the head stones and smaller tombs are sunken and out of their original positions, partly through the weather, and perhaps, through grading; also, that very many of the most ancient stones are cracking and going to swift decay.

We recommend that the tombs be repaired at once, or, if found necessary, rebuilt. This will entail a probable outlay of about $250.00. We also recommend that all the head stones now sunken and askew, should be raised, set straight in beds of asphalt, and that some method be found to repair the damage to the weather-cracked stones, and to preserve the most ancient, at least, from the ravages of the curio hunters. We also believe action should be taken to re-establish our rights to all land containing graves that evidently come under our care.

Your committee believes the sum of one thousand dollars ($1,000 00) will be necessary to complete the whole work and that it is most desirable that it be attended to at once."

This Board agrees with the report of its Committee and recommends favorable consideration of its suggestions.

It is not possible for this City, with its wealth of historical matter,

contemporaneous with the early history of the colony, to refuse to do all in its power to fittingly preserve any evidences of the character or standard of its early settlers.

Visitors from far and near call at this old ground and spend hours at a time in examining the epitaphs, savoring so much of antiquity to the modern idea.

During the progress of the work of thinning the shrubbery, as before noted, two old slate tablets were unearthed, which had undoubtedly fallen some time since, and subsequent grading had caused them to be covered until the work of renovation brought them once more to light.

It might be interesting to note the discovery of an old headstone of the Revolutionary period in the field opposite Elmwood, the residence of the late James Russell Lowell.

While excavations were being made preparatory to building, a portion of the bones of a human body were exhumed, and with them, this headstone.

As Elmwood was, during the Revolution, used as a hospital, being at that time the residence of Lieutenant-Governor Oliver, it is undoubtedly true that the remains were those of a patriotic American soldier.

In agreement with a suggestion of the late Wm. A. Saunders, of this City, who was a member of the first Board of Cemetery Commissioners, and on request of the Mayor, re-interment was made in the Ward One Ground, and the Commissioners chose a spot facing Garden Street, just westerly from the Monument erected to the memory of the Soldiers who fell in the Lexington Fight.

The stone, which was in an admirable state of preservation, has been sunk into a large granite tablet, securely fastened and placed over the remains.

The inscription on the stone is as clear, apparently, as when first cut, and is as follows:

"In Memory of
MR. JOSEPH TAYLOR
son of Mr. Isaiah
Taylor
of Peterborough
In New Hampshire.
he died Aug't ye 17th, 1775
Aged 18 years.
Made at Newton."

On the granite tablet, below the stone, this inscription was placed: —

"Wounded at Bunker Hill —
Died in the Army Hospital —
Lt. Gov. Oliver's Mansion.
Cambridge.

—

1899."

SUMMARY.

The Board would respectfully request favorable consideration of the following items for special appropriation : —

1. The regrading, refilling and surfacing of Summit, Island, Meadow, Oak and other avenues. Expense, $500.00.

2. The construction of a guard-rail along Meadow Avenue. Expense, $200.00.

3. Special appropriation for Ward One Burial Ground. Expense, $1,000.00.

4. Filling in the Pond. Expense, $8,000.00.

GEORGE S. SAUNDERS, *Chairman,*
NATHAN C. LOMBARD,
JOHN H. H. McNAMEE,
HERBERT A. CHASE,
WILLIAM A. BERTSCH,
CHARLES O. WELCH,

Board of Cemetery Commissioners.

ANNUAL REPORT OF THE CHIEF ENGINEER OF THE FIRE DEPARTMENT

Chief Engineer's Office, City Hall,
Cambridge, Mass., December, 1899.

To the Honorable, the City Council: —

Gentlemen: — Herewith I have the honor to submit to you the Annual Report of the Fire Department for the fiscal year ending November 30, 1899, being my twenty-first annual report.

It embraces a statement showing the condition of the Department; also the number of fires and alarms of fires which have occurred during the year, together with the losses and insurance, as near as could be ascertained, a roster in full of the Department, the amount of expenditures, and such other information as thought proper for your consideration.

MANUAL FORCE.

The force, at the present time, consists of a chief engineer, one district chief engineer, a chief driver, and one hundred and twenty-one officers and men, divided into twelve companies, viz.; seven steam engine companies, two chemical engine companies, and three ladder companies. Forty-eight are permanently employed, and seventy-three are call men.

There are two vacancies, one in the permanent force and one in the call force.

On November 9, seven men were appointed on the permanent force and the call force reduced by an equal number. The change to take effect on December 1, 1899.

APPARATUS.

Engine No. 5 was sent to the shop for repairs on November 30, 1898, and returned on February 10, 1899, after having been refitted with a new boiler, and thoroughly repaired and painted. During the year, the boiler of Engine No. 6, which had been in service for over nine years, was found

to be in a leaky condition, and after a thorough inspection was made as to its safety, it was found advisable to have it replaced with a new one. The engine was sent to the Manchester Locomotive Works, Manchester, New Hampshire, August 29, to have the work done; also to have the engine fully repaired and painted.

The remaining apparatus is in good condition with the exception of the ladder carriages, which are greatly in need of being overhauled and painted, and Hose Carriage No. 4, which should be replaced with a hose wagon, and I would renew my recommendation of last year that this change be made; also that a ladder carriage be purchased, to be used in case of an emergency.

HOSE.

During the year 700 feet of two and one-half inch cotton hose was destroyed by being burnt at fires, 400 feet condemned, and 1,300 feet bought. There is now in the service and in good condition 13,450 feet; also 750 feet of one-inch rubber-hose and 250 feet of two-inch cotton and linen hose in use on chemical engines.

HORSES.

During the year four horses that had been in the service for several years were disposed of and five horses purchased, one of the latter for the purpose of completing the three-horse hitch on engine No. 1. It will be necessary the coming year to dispose of three horses now in the service, as they are getting too old to do the work required of them. There are now thirty-six horses in the service, and with the exception of the three above-mentioned are in good condition.

HOUSES.

The stable in Engine House No. 1 was remodeled and enlarged during the year, at considerable expense. The change was much needed in order to make it more suitable and better adapted for its requirements.

The houses of the department are, with the exception of Ladder House No. 1, in good condition. This house is very poorly arranged, both for the convenience of the men and horses, and also the apparatus.

I wish to call your attention to the need of better protection in case of fire in Ward 5, — the nearest ladder company being located on Eliot Square. I would therefore recommend that some provision be made the coming year toward establishing a ladder company in that district.

APPROPRIATION AND EXPENDITURES.

The appropriation for the maintenance of this department for the year ending November 30, was $85,000; the receipts were $187.20. The principal items of expenditures were as follows: —

Apparatus, and repairs of	$2,636 39
Bedding and furniture	95 68
Buildings, repairs on	1,931 95
Fuel for houses and engines	1,881 30
Gas and electric light	745 82
Hardware and tools	155 98
Harnesses, and repairs of	423 10
Hay, grain and straw	3,519 56
Horses and men (extra)	1,170 00
Horses	880 00
Horseshoeing	656 08
Hose, and repairs of	1,402 63
Pay-roll	68,370 70
Washing	198 75
Miscellaneous	832 29
Total	$84,900 23
Balance unexpended	99 77

FIRES AND ALARMS.

The total number of fires and alarms for the year beginning December 1, 1898, and ending November 30, 1899, was two hundred and ninety-five; eighty-six more than in the previous year. Of this number, two hundred and thirteen were bell alarms and eighty-two were still alarms. This does not include four second alarms, three third alarms, and one general alarm.

The fires that caused the greatest losses during the year, was the burning of the Harvard School, on March 21, causing a loss of $20,000. The fire which started in the building occupied by the Bay State Metal Works, *et als.*, Nos. 41 and 49 Harvard Street, on April 7, causing a loss of $85,872. The fire, which originated in a shed on Bell Court, and which extended to other buildings on the court, and to buildings on Sidney, Erie and Waverly Streets, on May 21, causing a loss of $31,000. On July 21, a fire started on the outside of a blacksmith's shop, No. 364 River Street, and destroyed property to the value of $24,800 in the neighborhood before it was extinguished.

The total losses, as near as could be ascertained, together with the amount of insurance and the amount of insurance paid, were as follows: —

	Losses.	Insurance.	Insurance Paid.
On Buildings	$108,892 51	$565,450 60	$ 78,542 81
On Contents	127,444 15	184,300 16	79,487 65
Totals	$236,336 66	$749,750 76	$158,030 46

DISCHARGES.

Josiah P. Parsons, a call member of Engine Company No. 4, February 10, at his own request.

Melvin A. Priest, a call member of Engine Company No. 6, July 16, at his own request.

Edward E. Priest, a permanent member of Engine Company No. 1, November 30, at his own request.

William Parks, a permanent member of Engine Company No. 6, November 30, at his own request.

John H. Robbins, a call lieutenant of Engine Company No. 6, November 30, at his own request.

DECEASE OF MEMBERS.

Engineman Thomas Wiseman, a permanent member, who had been a member of the department for thirty-five years, died on January 18, with pneumonia. District Chief Engineer William B. Cade, a call member, who had been connected with the department about forty-five years, died very suddenly on September 7, with heart trouble.

Engineman John H. Walker, a permanent member, and who had been connected with the department for over fifty years, died on September 18, with heart trouble.

APPOINTMENTS.

William H. Murray, appointed a call-man December 8; Mortimer F. Hartney, George B. Morse, and Charles P. Cox, Jr., were appointed call members December 22; Henry J. O'Brien, appointed a call member December 29; John D. Shea, appointed a permanent member February 2; Thomas J. Parks, appointed a call member August 8.

The following named were appointed permanent men November 9, said appointments to take effect on December 1, 1899: Thomas F. Drummond, William F. Newman, John T. Henderson, Frank McGrath, Robert J. Buchanan, James P. O'Neill, Thomas H. McCourt and Timothy Curran.

ACCIDENTS.

The following named members of the department were injured while responding to, or working at fires:

Captain Francis B. Scanlan, head cut by falling timbers, March 21.

Captain John T. McNamee, severely strained his back by slipping on stairs, March 21. Off of duty thirteen days.

Thomas F. Mullin, knee and hand injured, falling, April 7. Off of duty twenty-three days.

Walter E. Chapman, back burned, April 7. Off of duty nine days.

Joseph E. Burke, strained muscles of his back, May 31. Off of duty seventeen days.

Lieutenant Arthur C. Day, dislocated shoulder, June 13. Off of duty twenty-six days.

Captain John T. McNamee, fell on the street, severely injuring his knee, August 24. Off of duty thirty-one days.

Captain Francis P. Scanlon, severely burned his hand, October 7. Off of duty seventeen days.

PENSIONS.

In accordance with the ordinance governing the Fire Deparment, the following named members of the department were retired, because of permanent disability, on November 30, and their names placed on the pension roll, to take effect on December 1, 1899: William Parks, Edward E. Priest, John H. Robbins.

CONCLUSION.

In closing this report, I desire to express my sincere gratitude for many courtesies received from, and valuable aid rendered by, your honorable body, and to the officers and members of this department for the close attention to their duties, and promptness in answering the numerous calls during the year.

To the Boston and Somerville Fire Departments my thanks are due for the efficient services rendered at fires in this city the past year.

Respectfully submitted,

THOMAS J. CASEY,
Chief Engineer.

APPENDIX

ROLL OF OFFICERS AND MEMBERS.

Engineers.

Name.	Rank.	Age.	Residence.
Permanent Force.			
Thomas J. Casey	Chief Engineer	66	449 Cambridge Street.
Call Force.			
Nathaniel W. Bunker	District Chief Engineer	56	97 Pemberton Street.
Permanent Force.			
Dennis R. Sullivan	Chief's Driver	28	35 Harvard Street.

Engine Company No. 1.

House, 108 Mt. Auburn Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
1	Edward E. Priest	Engineman	63	96 Winthrop Street.
31	Daniel E. Powers	Assistant Engineman	40	37 Ash Street.
2	Hiram W. Hooker	Driver	60	108 Mt. Auburn Street.
28	Daniel E. Shea	"	42	6 DeWolf Street.
	Call Force.			
27	John L. Jones, Jr	Captain	48	209 Green Street.
29	Thomas H Kneeland	Lieutenant	35	17 Eliot Street.
25	James Jefferson	Hoseman	45	9 Eliot Street.
23	J. Joseph Corcoran	"	39	34 Ash Street.
26	Walter E. Chapman	"	32	27 Athens Place.
74	James W. Irwin	"	44	5 Story Street.
30	John J. Foley	"	37	1 Hancock Street.
97	George B. Morse	"	32	23 Boylston Street.

Engine Company No. 2.

House, 384 Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
41	William H. Cairns	Engineman	36	105 School Street.
80	John H. McDermott	Assistant Engineman	48	11 Dodge Street.
114	Angus H. McDonald	Driver	29	106 Washington Street.
6	Albert F. Sawyer	"	56	18 Brookline Street.
	Call Force.			
32	James Cunningham	Captain	57	25 State Street.
33	Arthur C. Day	Lieutenant	63	47 Austin Street.
35	Benjamin D. Foss	Hoseman	63	78 Elm Street.
37	John Haley	"	45	344 Massachusetts Avenue.
88	Charles H. Cutting	"	47	6 Harold Place.
40	George F. Donovan	"	30	54 Sidney Street.
107	William H. Hanson	"	32	73 Hampshire Street.
119	Robert J. Ballantine	"	38	402 Putnam Avenue.

Engine Company No. 3.

House, 35 Third Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
7	Hiram Blood	Engineman	68	40 Fifth Street.
62	Charles A. Blair	Assistant Engineman	38	22 Springfield Street.
8	Peter F. McSorley	Driver	40	33 Fourth Street.
49	Patrick J. Hayes	"	37	92 Gore Street.
	Call Force.			
42	Walter Baker	Captain	46	91 Gore Street.
48	John F. Brassel	Lieutenant	45	3 Marney Street.
45	Eliot E. Alley	Hoseman	63	73 Thorndike Street.
46	Timothy J. Mahoney	"	52	346 Vine Street.
115	Frank McGrath	"	35	168 Willow Street.
16	William H. Murray	"	46	8 Sixth Street.
112	Charles H. Leddy	"	39	89 Gore Street.
15	William F. Newman	"	29	37 Jefferson Street.

Engine Company No. 4.

House, 2029 Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
10	John E. Ricker	Engineman	55	2029 Massachusetts Avenue.
55	Jeremiah O'Connor	Asst. Engineman	41	2 Olive Place.
19	Albert S. Benson	Driver	57	52 Boylston Street.
11	George E. Muzzey	"	58	5 Blake Street.
	Call Force.			
51	Daniel A. McCaughin	Captain	42	Rear 5 Russell Street.
57	John T. Henderson	Lieutenant	30	128 Reed Street.
54	George F. Durgin	Hoseman	31	12 Regent Street.
53	Redmond M. Burke	"	30	Rear 5 Russell Street.
52	Joseph T. Vocell	"	34	12 Bolton Street.
105	William F. Henderson	"	35	74 Rice Street.
50	George L. Vocell	"	30	23 Bolton Street.
56	Joseph A. Henderson	"	25	134 Reed Street.

Engine Company No. 5.

House, Inman Square.

No of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
13	Charles E. Conner	Engineman	48	1337 Cambridge Street.
9	Lorenzo H. Dale	Asst. Engineman	56	104 Otis Street.
3	Charles R. Hooker	Driver.	55	1411 Cambridge Street.
68	James H. Furfey	"	42	59 Prince Street.
	Call Force.			
59	Francis B. Scanlan	Captain	53	1343 Cambridge Street.
64	William T. King	Lieutenant	43	100½ Hampshire Street.
61	George W. McIntire	Hoseman	45	7 Springfield Street.
67	George P. Bannister	"	39	7 Springfield Street.
66	James H. McGrath	"	43	126 Webster Avenue.
60	George W. Stevens	"	33	1307 Cambridge Street.
104	Charles Barney	"	37	60 Austin Street.
63	George W. Montgomery	"	39	40½ Baldwin Street.

Engine Company No. 6.

House, 176 River Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
98	J. Lewis Howe	Engineman	46	184 River Street.
87	Charles A. Cairns	Assistant Engineman	33	152 River Street.
127	John J. O'Callahan	Driver	30	136½ Green Street.
34	William Parks	"	55	208 River Street.
	Call Force.			
24	John H. Brown	Captain	48	206 River Street.
101	John H. Robbins	Lieutenant	44	34 Pearl Street.
100	John E. Savage	Hoseman	45	31 Kinnaird Street.
73	Charles H. Waite	"	53	95 Pine Street.
103	Thomas F. Mullin	"	26	308 Western Avenue.
123	Louis Clauss	"	31	72 Allston Street.
106	Mortimer F. Hartney	"	25	12 Lawrence Street.
102	Thomas J. Parks	"	23	16 Bristol Street.

Engine Company No. 7.

House, 350 Main Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
85	Thomas F. O'Connell	Engineman	38	155 Webster Avenue.
121	John D. Shea	Driver	28	136 Winsor Street.
36	John McCarthy	"	46	139 Massachusetts Avenue.
	Call Force.			
93	George A. Garrity	Captain	38	5 Pioneer Street.
124	Joseph A. Wood	Lieutenant	37	81 Hampshire Street.
109	James E. Bligh	Hoseman	28	142 Willow Street.
108	Thomas A. Montgomery	"	35	70 Berkshire Street.
125	Edward Clark	"	31	234 Winsor Street.
86	James H. Skehan	"	30	70 Berkshire Street.
96	Louis J. Anshelm	"	39	41 Portland Street.
110	James P. O'Neill	"	32	51 Bristol Street.

Chemical Engine Company No. 1.

House, 5 Western Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
17	Lewis C. Clark	Lieutenant	54	48 Western Avenue.
82	James T. McCabe	Engineman	36	39 Green Street.
99	John H. Dardis	Driver	29	27 Park Street.

Chemical Engine Company No. 2.

House, 167 Lexington Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
94	George W. Butler	Lieutenant	57	171 Lake View Avenue.
58	William H. Barrow	Engineman	30	117 Lexington Avenue.
18	William Haley	Driver	53	133 Lexington Avenue.

Ladder Company No, 1.

House, Eliot Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
22	John T. McNamee	Captain	44	94 Winthrop Street.
117	Edward F. Conroy	Lieutenant	28	259 Mt. Auburn Street.
77	Benjamin McArthur	Ladderman	25	4 DeWolf Place.
122	Arthur G. McArthur	"	27	4 DeWolf Place.
75	Charles A. Olsen	Driver	32	16 Eliot Street.
	Call Force.			
79	Edward P Donahue	Ladderman	42	1 Willard Street Court.
72	Joseph E. Burke	"	37	70 Plympton Street.
14	William H. Buchanan	"	31	274 Mt. Auburn Street.
70	John W. Jefferson	"	34	9 Gerry Street
71	Charles P. Cox, Jr.	"	28	70 Magee Street.
120	Frederick Quenandon	"	27	236 Franklin Street.
92	Robert J. Buchanan	"	28	20 Grigg Street.

Ladder Company No. 2.

House, 276 Portland Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
43	William F. Newman	Captain	54	66 Winter Street.
83	James M. Casey	Lieutenant	35	775 Cambridge Street.
38	Albert R. Wait	Ladderman	27	934 Cambridge Street.
20	Thomas Mimnaugh	Driver	46	35 Warren Street.
	Call Force.			
90	Albert Smith	Ladderman	45	Portsmouth Street.
95	Louis J. Stanger	"	45	275 Vine Street.
89	John J. Balfe	"	28	385 Norfolk Street.
111	Jeremiah F. Hayes	"	33	17½ Marney Street.
116	Thomas J. Lane	"	35	35 Warren Street.
113	William G. Johnson	"	38	14 Springfield Street.
81	Henry J. O'Brien	"	23	746 Cambridge Street.
65	Timothy Curran	"	30	36 Harding Street.

Ladder Company No. 3.

House, 394 Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
21	Thomas L. Hunter.....	Captain.....	59	434 Massachusetts Avenue.
44	Cutler L. Vose.....	Lieutenant.....	31	394 Massachusetts Avenue.
47	Exurie J. Onimette.....	Tillerman.....	36	456 Massachusetts Avenue.
118	William C. Richardson....	Driver	31	394 Massachusetts Avenue.
	Call Force.			
69	Charles Emerson.....	Ladderman	54	5 Kinnaird Street.
76	Charles A. Sharon.....	"	51	Rear 13 Pine Street.
91	Lincoln E. Wheeler.....	"	55	76 Elm Street.
84	William D. Donovan	"	26	18 Blanche Street.

FIRES AND ALARMS.

From December 1, 1898, to December 1, 1899.

DECEMBER.

Thursday, Dec. 1, 1.03 A. M. Box 43.

No. 90 DeWolf Street. Owned by E. T. Broderick. Loss, $250. Insurance, $4,000. Occupied by E. T. Broderick & Co. as grocery and provisions. Loss, $450. Insurance $2,440. Originated in a rear room. Cause, unknown.

Friday, Dec. 2, 4.15 P. M. Still.

First Street. Occupied by The J. H. Keenan Co., as planing mill. Cause, accidental automatic alarm.

Saturday, Dec. 3, 5.57 P. M. Box 53.

Bow Street. Occupied as dormitory. No loss. Cause, soot in chimney afire.

Tuesday, Dec. 6, 7.22 P. M. Box 152.

No. 1252 Massachusetts Avenue. Cause, sparks coming from a chimney.

Thursday, Dec. 8, 6.04 P. M. Box 53.

No. 2 Holyoke Street. Cause, sparks coming from a chimney.

Wednesday, Dec. 14, 2.54 A. M. Box 162.

No. 5 Sparks Street. Owned by Sarah Beckett. Loss, $220. Insurance, $1,500. occupied by Sarah Beckett, et al, as dwellings. Loss trifling. Cause, thawing out frozen water pipe.

Wednesday, Dec. 14, 11.30 A. M. Still.

No. 187 Hampshire Street. Occupied by A. E. Jenness as dwelling. Loss trifling. Cause, thawing out frozen water pipe.

Wednesday, Dec. 14, 10.30 P. M. Still.

No. 12 Cherry Street. Occupied by C. W. Carman as wagon shed. No loss. Cause, unknown.

Friday, Dec. 16, 4.54 P. M. Box 49.

Trowbridge Street. Owned by City of Cambridge as schoolhouse. No loss. John S. Jacobs, contractor. Loss, $675. Insurance, $150,000. Originated in the basement in a barrel of naphtha. Cause, a lighted torch.

Friday, Dec. 16, 5.25 P. M. Box 51.

Trowbridge Street. Cause, rekindling of fire.

Saturday, Dec. 17, 4.15 P. M. Still.

First Street. Occupied by The J. H. Keenan Co. as planing mill. Cause, accidental automatic alarm.

Saturday, Dec. 17, 4.45 P. M. Box 32.

No. 1041 Cambridge Street. Owned by Heffernan estate. Loss, $385. Insurance $5,000. Occupied by J. C. Donovan as dry goods. Loss, $1,675. Insurance, $3,000. Cause, gas jet igniting goods in window.

Monday, Dec. 19, 4.50 P. M. Still.

No. 20 Thorndike Street. Occupied by H. M. Sawyer & Son as oilcloth manufactory. Cause, accidental automatic alarm.

Tuesday, Dec. 20, 8.15 A. M. Still.

No. 1300 Cambridge Street Owned by T. W. Coakley as dwelling. Loss trifling. Cause defective chimney.

Thursday, Dec. 22, 12.28 P. M. Box 43.

No. 46 Flagg Street. Owned by John Sullivan. Occupied by Mary Foley as dwelling. Originated in a closet. Loss trifling. Cause, supposed by mice and matches.

Friday, Dec. 23, 10.21 P. M. Box 14.

No. 544 Cambridge Street. Owned by E. H. Blake. Occupied as fruit store. No loss. Cause, falling of a gasoline lamp.

Saturday, Dec. 24, 7.35 P. M. Box 45.

No. 131 Franklin Street. Owned by H. E McGoldrick. Loss, $25. Insurance, $2,500. Occupied by H. E. McGoldrick as dwelling. Loss, $65. Insurance, $1,500. Cause, curtain ignited by a lighted candle.

Tuesday, Dec. 27, 4.30 P. M. Still.

No. 498 Massachusetts Avenue. Occupied by H. O. Manning as variety store. No loss. Cause, decorations around gas fixtures taking fire.

Wednesday, Dec. 28, 5.50 P. M. Box 48.

No. 1407 Cambridge Street. Owned by M. J. Harty. Loss, $960. Insurance, $18,000. Occupied by B. E. Clarkson as dry goods. Loss, $1,557. Insurance, $2,000. Cause, explosion of leaking gas.

Thursday, Dec. 29, 12.30 A. M. Box 14.

No. 130 Gore Street. Owned by C. W. H. Moulton & Co. Loss, $190. Insurance, $2,500. Occupied by C. W. H. Moulton & Co. as storage, and manufacture of ladders. Loss, $50. No insurance. Occupied by F. S. Adams & Co., as cooper. Loss, $75. Insurance, $500. Originated in wooden spittoon filled with sawdust, in the office.

Saturday, Dec. 31, 12.10 A. M. Box 14.

No. 91 Fifth Street. Owned by Estate of George Frazier. Loss, $75. Insurance, $1,500. Occupied by James Maloney as dwelling. Loss, trifling. Cause, lighted candle in contact with curtain.

Saturday, Dec. 31, 6.50 P. M. Still.

No. 14 Laurel Street. Occupied by G. L. Carrier as stable. Loss, trifling. Cause, upsetting of a lighted lantern in hay loft.

JANUARY.

Monday, Jan. 2, 6.50 A. M. Box 162.

Hubbard Park. Occupied by H. P. Cross as dwelling. No loss. Cause, overheated fire-place.

Monday, Jan. 2, 9.45 A. M. Box 137.

No. 18 Magee Street. Owned by Major Walker. Loss, $211. Insurance, $1,400. Occupied by Major Walker as dwelling. Loss, slight. Originated in a partition on first floor. Cause, supposed by mice and matches.

Wednesday, Jan. 4, 8.14 P. M. Box 46.

No. 77 Kinnaird Street. Occupied by H. J. Snyder as dwelling. Loss, slight Originated in a child's crib. Cause, child and matches.

Thursday, Jan. 5, 6.04 P. M. Box 51.

No. 450 Broadway. Owned by J. M. Wood as unoccupied dwelling. No loss. Cause, incendiary.

Saturday, Jan. 7, 11.05 A. M. Still.

No. 6 Fourth Street. Occupied by Francis Babrick as dwelling. Loss, slight. Originated in a closet, cause, child and matches.

Saturday, Jan. 7, 7.49 P. M. Box 13.

No. 79 Gore Street. Owned by P. J. Calnan. Loss, $55. Insurance, $1,000. Occupied by P. J. Calnan as dwelling. Loss, slight. Originated in the attic. Cause, oil stove taking fire.

Tuesday, Jan. 10, 3.18 A. M. Box 73.

No. 456 Rindge Avenue. Owned by Bridget McCall as unoccupied dwelling. Loss, $900. Insurance, $900. Cause, incendiary.

Tuesday, Jan. 10, 12.03 P. M. Box 14.

No. 600 Cambridge Street. Occupied by Samuel Rosenburg as storage for boots and shoes. Loss, $1,231. Insurance, $15,000. Cause, oil stove taking fire.

Wednesday, Jan. 11, 6.21 P. M. Box 71.

No. 2510 Massachusetts Avenue. Owned by R. K. Reed. Loss, $1,452. Insurance, $2,500 Occupied by R. K. Reed as dwelling. Loss, $450. Insurance, $1,000. Originated in bathroom on 2nd floor. Cause, oil stove taking fire.

Wednesday, Jan. 11, 7.36 P. M. Box 136.

No. 1 Norfolk Place. Owned by Estate of J. R. Smith as dwelling. No loss. Cause, soot in chimney taking fire.

Thursday, Jan. 12, 3.34 A. M. Box 8.

No. 30 Bridge Street Owned by Horatio Wellington & Co. Loss, $400. Insurance, $6,000. Occupied by Horatio Wellington & Co. as engine room and coal shed. Loss, $900 Insurance, $1,000. Cause, hot ashes on floor.

No. 46 Bridge Street. Owned by Charles Linehan. Loss, $938. Insurance, $3,500. Occupied by City of Boston as wood shed. Loss, $390. Insurance, $2,500. Cause, exposure.

Friday, Jan. 13, 1.52 A. M. Box 9.

No. 36 Otis Street. Owned by Pfaff estate. Loss, $45. Insurance, $2,000. Occupied by Allington & Curtis Manufacturing Co. No loss. Cause, hot ashes in barrel.

Sunday, Jan. 15, 10.15 P. M. Still.

Harvard Bridge. Planking of bridge afire. Loss slight. Cause, electric wires.

Monday, Jan. 16, 6.22 P. M. Box 32.

No. 1116 Cambridge Street. Owned by E. H. Delaney. Loss, $160. Insurance, $5,000. Occupied by Pill Brothers as variety store. Loss, $200. Insurance, $2,000. Originated in packing hay in the cellar. Cause, upsetting of an oil lamp.

Monday, Jan. 16, 7.48 P. M. Box 168.

No. 18 Cogswell Avenue. Cause, smoke mistaken for fire.

Tuesday, Jan. 17, 4 49 P. M. Box 418.

No. 145 Broadway. Owned and occupied by Sylvester Tower as piano key and action manufactory. No loss. Originated in store room. Cause, top of lighted match flying into and igniting alcohol.

Wednesday, Jan. 18, 12.57 A. M. Box 28.

No. 184 Broadway. Owned and occupied by Curtis Davis & Co. as soap manufactory. No loss. Originated in a barrel of old material in the yard. Cause, spontaneous combustion.

Wednesday, Jan. 18, 3.16 P. M. Box 9.

No. 183 Cambridge Street. Owned by J. L. Bailey. Loss, $250. Insurance, $1,000. Occupied by Daniel Robinson as fruit store. Loss, $100. No insurance. Occupied by Frank Andrew as dwelling. Loss, $103. Insurance, $1,000. Originated in fruit store. Cause, oil stove taking fire.

Thursday, Jan. 19, 5.34 P. M. Box 46.

No. 898 Massachusetts Avenue. Owned by W. F. Herter. Loss, $47. Insurance, $3,000. Occupied by M. E. Metcalf as dwelling. Loss, $75. No insurance. Cause, overturning of an oil heater.

Monday, Jan. 23, 9.14 A. M. Box 167.

No. 24 Avon Hill Street. Occupied by S. H. Dudley as dwelling. No loss. Cause, oil stove taking fire.

Monday, Jan. 23, 2.54 P. M. Box 54.

Divinity Avenue. Cause, burning grass.

Friday, Jan. 27, 3.03 A. M. Box 26.

No. 744 Main Street. Owned by C. E. Smart. Loss, $202. Insurance, $4,000. Occupied by Standard Turning Works. Loss, $200. No insurance. Occupied by F. L. Howe as antique furniture manufactory. Loss, $425. No insurance. Occupied by Shaw & Remby as wood workers. Loss, $550. Insurance, $1,800. Originated in Standard Turning Works. Cause, unknown.

Sunday, Jan. 29, 8.23 A. M. Box 137.

No. 270 Western Avenue. Owned by S. A. Dyme. Occupied by several families as dwellings. No loss. Cause, hot ashes in barrel.

Sunday, Jan. 29, 11.01 P. M. Box 59.

No. 31 Boylston Street. Occupied by H. B. Durant as tailor. Cause, building supposed to be afire because of the reflection of a fire in stove.

FEBRUARY.

Saturday, Feb. 4, 8.15 P. M. Box 51.

No. 49 Ellery Street. Owned by T. C. Raymond Loss, $50. Insurance, $1,500. Occupied by J. E. Jamieson as dwelling Loss, $35. Insurance, $1,000. Originated in bathroom. Cause, gas jet igniting wood-work.

Sunday, Feb. 5, 11.42 P. M. Box 71.

No. 2523 Massachusetts Avenue. Owned by Ferdinand Fischer. Loss, $45 Insurance, $2,400. Occupied by J. H. Phipps as dwelling. Loss, $178. Insurance, $1,000 Occupied by Ferdinand Fischer as dry goods and boots and shoes. Loss, $69. Insurance, $2,000. Originated in dwelling on second floor. Cause, lounge near stove taking fire.

Tuesday, Feb. 7, 4.45 P. M. Still.

No. 46 Boylston Street. Owned by Estate of William Read. Loss, trifling. Occupied by John Hillis as dwelling. Loss, $195. Insurance, $1,000. Originated in a clothes closet. Cause, mice and matches.

Thursday, Feb. 9, 9.45 P. M. Box 75.

No. 53 Sherman Street. Owned by Agnais Rocke. Loss, $2,000. Insurance, $2,500. Occupied by Francis Trembley as dwelling. No loss. Occupied by P. L. Robillard as groceries and provisions. Loss, $400. Insurance, $500. Originated on second floor. Cause, unknown.

Friday, Feb. 10, 6.14 A. M. Box 13.

No. 100 Winter Street. Owned by McMenimen estate. Loss, $504. Insurance, $3,000. Occupied by Mary McMenimen as dwelling. Loss, $196. Insurance, $500. Occupied by Frederick McMenimen as dwelling. Loss, $214. Insurance, $1,000. Originated under a sink. Cause, thawing out water pipe.

Friday, Feb. 10, 2.29 P. M. Box 115.

No. 104–106 Munroe Street. Owned by E. W. Roberts. Loss, $60. Insurance, $2,500. Occupied by several families as dwellings. Loss, trifling. Cause, thawing out water pipe.

Saturday, Feb. 11, 3.45 P. M. Box 26.

No. 8 Clark Street. Owned by Patrick Phalen as dwelling. Loss, trifling. Cause, thawing out water pipe.

Sunday, Feb. 12, 12.05 P. M. Still.

No. 745 Cambridge Street. Occupied by Mary McCarthy as dwelling. Loss, trifling. Originated in wood-box near stove. Cause, unknown.

Sunday, Feb. 12, 2.10 P. M. Box 36.

No. 120 Austin Street. Owned by Heirs of C. W. Dudley. Loss, $175. Insurance, $1,600. Occupied by A. A. Weeks as dwelling. Loss, $97. Insurance, $300. Cause, thawing out water pipe.

Sunday, Feb. 12, 9.26 P. M. Box 419.

No. 184 Broadway. Owned and occupied by Curtis Davis & Co. as soap manufactory. No loss. Originated in barrel of oiled waste, in engine room. Cause, spontaneous combustion.

Monday, Feb. 13, 8.45 P. M. Still.

Washington Street, Somerville. Assistance called for. Engine Company No. 5 answered.

Friday, Feb. 17, 6.01 P. M. Box 413.

No. 146 Sixth Street. Owned by Alden Speare's Sons & Co. as oil dealers. No loss. Originated in oiled waste. Cause, spontaneous combustion.

Sunday, Feb. 19, 11.29 A. M. Box 116.

No. 11 Broadway. Owned by Beckett heirs. Loss, $15. Insurance, $2,500. Occupied by Chiretta Mfg. Co. as manufacturers of tonic. No loss. Cause, oil stove taking fire.

Thursday, Feb. 23, 1.45 A. M. Still.

Rear 108 Broadway. Unoccupied building. Cause, slacking of lime.

MARCH.

Friday, March 3, 3.10 A. M. Box 32.

No. 1060 Cambridge Street. Owned by J. H. Keenan. Loss, $100. Insurance, $300. Occupied by W. H. Stahl as hay and grain. Loss, $59. Insurance, $500. Cause, unknown.

Friday, March 3, 12.46 P. M. Box 134.

No 242 Norfolk Street. Owned by S. E. Willis. Loss, $175. Insurance, $1,800. Occupied by T. H. Smith as dwelling. Loss trifling. Originated in a case of drawers in the attic and extended to roof. Cause, unknown.

Monday, March 6, 6.23 P. M. Box 29.

No. 9 Plymouth Street. Occupied by Robert Carson as dwelling. Loss trifling. Originated in a curtain. Cause, child and matches.

Wednesday, March 8, 8.44 A. M. Box 73.

No. 5 Clay Street. Owned and occupied by Michael Doran as dwelling. Loss trifling. Originated in the cellar. Cause, unknown.

Thursday, March 9, 2.52 P. M. Box 165.

No 27 Hurlburt Street. Owned by E. S. Sheldon as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, March 14, 9.18 A. M. Box 35.

No. 22 1-2 Suffolk Street. Owned by Glotzen Wolf. Loss, $109. Insurance, $3,500. Occupied by Glotzen Wolf as dwelling. Loss, $48. Insurance, $500. Cause, overturning of kettle of fat on stove.

Wednesday, March 15, 12.45 P. M. Still.

No. 136 Austin Street Owned by Cambridge Young Woman's Christian Association. Loss trifling. Originated in the floor over the furnace. Cause, supposed by overheated furnace pipes.

Saturday, March 18, 8.45 A. M. Still.

No. 34 Buckingham Street. Occupied by D. R. Chapman as dwelling. No loss. Cause, soot in chimney afire.

Saturday, March 18, 3.18 P. M. Box 41.

No. 132 Pleasant Street. Owned by Ann Allen as dwelling. No loss. Cause, thawing out water pipe.

Tuesday, March 21, 2.48 A. M. Box 149.

No 48 Baldwin Street. Owned by G. E. Francis. Loss, $400. Insurance, $650. Occupied by Francis Brothers as grocery. Loss, $1,005. Insurance, $1,500. Cause, supposed by the explosion of an oil lamp which was left lighted.

Tuesday, March 21, 4.33, 4.37, 4.43 A. M. Boxes 35 and 47.

Inman Street. Owned by the City of Cambridge as the Harvard Schoolhouse. Loss, $20,000. No insurance. Cause, supposed by electric wires.

Wednesday, March 22, 8.45 P. M. Still.

No. 34 Pine Street. Occupied by C. H. Miller as dwelling. Loss trifling. Cause, lamp setting fire to a curtain.

Saturday, March 25, 4.27 P. M. Box 43.

No. 80 Banks Street. Owned by J. H. Lalley. Occupied by M. J. O'Brien as grocery. No loss, originated in the office. Cause, overturning of an oil heater.

Tuesday, March 28, 10.31 A. M. Box 153.

No. 108 Plympton Street. Owned by Nellie White as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, March 28, 2.22 P. M. Box 31.

No. 148 Berkshire Street. Owned by J. H. Green as dwelling. Loss, trifling. Originated on third floor. Cause, match igniting lace curtain.

Tuesday, March 28, 10.50 P. M. Box 43.

No. 86 De Wolf Street. Owned by Broderick estate as unoccupied store. Loss, trifling. Cause, incendiary.

Wednesday, March 29, 7.19 P. M. Box 137.

No. 221 Western Avenue. Owned by C. L. Montague. No loss. Occupied by C. H. Douglass as grocery. Loss, $102. Insurance, $1,000. Originated in potato bags in a rear room. Cause, unknown.

Friday, March 31, 3.55 P. M. Still.

Harvard Street. Old Cambridge Baptist Church. Cause, smoke from chimney mistaken for fire.

Friday, March 31, 5.27 P. M. Box 75.

Raymond Street. Cause, false alarm given by a malicious boy.

APRIL.

Monday, April 3, 9.10 A. M. Still.

No. 604–610 Massachusetts Avenue. Occupied by A. H. Smith as provisions. No loss. Cause, dropping of a lighted match.

Monday, April 3, 6.13 P. M. Box 13.

No. 359–361 Cambridge Street. Owned by W. L. Lockhart. Loss, $1,475. Insurance, $4,000. No 359 where the fire originated was unoccupied No. 361 occupied by P. J. Finnigan as dwelling. Loss, $1,100. Insurance, $2,000. Originated in excelsior in the cellar. Cause, unknown.

Wednesday, April 5, 1.32 P. M. Box 65.

Shepard Street. Cause, grass burning in a vacant lot.

Wednesday, April 5, 2.55 P. M. Box 52.

Green Street. Owned by W. A. Strauss as unoccupied dwelling. Loss, trifling. Originated on roof of L. Cause, sparks from burning rubbish.

Thursday, April 6, 6 P. M. Still.

No. 6 East Street. Owned by John Hawks as dwelling. Loss, trifling. Originated on roof. Cause, sparks.

Friday, April 7, 12.50 A. M. Box 59.

Brattle Street. Cause, smoke mistaken for fire.

Friday, April 7, 6.31 P. M. Box 9.

No. 108 Cambridge Street. Owned and occupied by A. H. Davenport as furniture manufactory. Loss, trifling. Originated among chips and shavings in boiler room. Cause, sparks from furnace.

Friday, April 7, 11.36, 11.40, 11.51, 11.55 P. M. Boxes 28 and 17.

Nos. 45–49 Harvard Street. Owned by A. W. Holton. Loss, $13,500. Insurance, $13,650. Occupied by Bay State Metal Works. Loss, $52,000. Insurance, $21,250. Occupied by Massachusetts Fan Company. Loss, $7,500. Insurance, $4,000. Occupied by Joseph Millen as iron works. Loss, $1,450. Insurance, $2,000. No 39 Harvard Street. Owned by John Duff Loss, $112 Insurance, $500. Occupied by John Duff as spring maker. Loss, $125. Insurance, $500 Nos. 33–37 Harvard Street. Owned by Joseph Forristall as dwellings. Loss, $92. Insurance, $10,000. Nos. 34–36 Harvard Street. Owned by John Keough as dwellings. Loss, $173. Insurance, $9,300. No. 50 Harvard Street. Owned by F. L. Willard Loss, $7,188. Insurance, $10,000 Occupied by Riverside Boiler Works. Loss, $13,661. Insurance $26,500. Nos. 55–57 Harvard Street. Owned by E D. Mellen as dwellings. Loss, $70. Insurance, $3,600. Originated in Holton Building. Cause, unknown.

Saturday, April 8, 3.27 A. M. Box 32.

No. 387 Norfolk Street. Owned by estate of M. E. Flynn. Loss, $250. Insurance, $250. Occupied by Louis Tracktenberg as stable and storage for rags. Loss, $150. No insurance. Cause, supposed by spontaneous combustion.

Saturday, April 8, 7.01 P. M. Box 23.

No. 57 Franklin Street. Occupied by W. H. Robertson as dwelling. Loss, trifling. Cause, upsetting of a kerosene lamp.

Saturday, April 8, 7.50 P. M Still.

Boylston Street. Cause, burning rubbish on dump.

Tuesday, April 11, 1.40 P. M. Box 116.

No. 226 Main Street. Owned by William Danehy. Loss, $88. Insurance, $3,800. Occupied by Simpson & Peggren as painters. Loss, trifling. Cause, oil stove taking fire.

Wednesday, April 12, 7.17 A. M. Box 28.

No. 178 Broadway. Cause, smoke mistaken for fire.

Wednesday, April 12, 11.08 P. M. Box 32.

No. 1060 Cambridge Street. Owned by J. H. Keenan. Loss, trifling. Occupied by W. H. Stahl as hay and grain. Loss, $238. Insurance, $500. Cause, unknown.

Friday, April 14, 4.30 P. M. Still.

No. 1½ Austin Street. Awning afire, and caused by the dropping of match from window. Loss, slight.

Saturday, April 15, 8.38 A. M. Still.

No. 20 Thorndike Street. Occupied by H. M. Sawyer & Son as oiled clothes manufactory. Cause, accidental automatic alarm.

Monday, April 17, 3.33 P. M. Box 79.

No. 26 Sparks Street. Owned by Patrick O'Connor. Loss, $205. Insurance, $2,000. Occupied by P. F. Green as dwelling. Loss, $175. Insurance, $600. Originated on second floor. Cause, defective chimney.

Monday, April 17, 9 P. M. Still.

No. 26 Winter Street. Occupied by Manual Grace as dwelling. No loss. Cause, rags on stove afire.

Wednesday, April 19, 12.27 P. M. Box 116.

Third Street. Owned by John Doherty as tool-house. Loss, slight. Originated on the roof. Cause, sparks.

Thursday, April 20, 2.29 P. M. Box 8.

Prison Point Street. Tar kettle afire. Cause, overboiling.

Friday, April 21, 9.40 P. M. Box 14.

No. 672 Cambridge Street. Occupied by John Hines as dwelling. Loss, trifling. Cause, breaking of a kerosene oil lamp.

Saturday, April 22, 12.35 P. M. Still.

Boylston Street. Cause, rubbish on dump burning.

Saturday, April 22, 3.34 P. M. Box 42.

Rear of 380 River Street. Owned by the City of Cambridge as bath-house. Loss, trifling. Cause, set afire by boys.

Sunday, April 23, 3.40 P. M. Still.

Chestnut Street. Grass in vacant lot afire. Cause, ignited by boys.

Sunday, April 23, 4.05 P. M. Still.

Foot of Fifth Street. Cause, grass in yard of J. P. Squire & Co. afire.

Monday, April 24, 7.12 P. M. Box 34.

No. 243 Columbia Street. Owned by Louis Banditon. Loss, $60. Insurance, $2,500. Occupied by Louis Banditon as dwelling. Loss, $400. Insurance, $2,000. Originated on second floor. Cause, gas jet igniting curtain.

Tuesday, April 25, 5.55 A. M. Box 59.

No. 8 Holyoke Street. Occupied by Louise Grimes as dwelling. Loss, $60. Insurance, $1,000. Cause, hot coals dropping from grate.

Tuesday, April 25, 3.09 P. M. Box 17.

No. 9 Burleigh Street. Owned by G. M. Rogers Estate. Loss, $460. Insurance, $2,000. Occupied by several parties as dwellings. No loss. Originated on second floor. Cause, unknown.

Wednesday, April 26, 4.50 A. M. Box 16.

Deacon Street. Owned by E. A, Dow. Loss, $70. Insurance, $1,800. Occupied by Hall–Smart Cleaning Company. Loss, $205. Insurance, $3,500. Originated under carpet beater on second floor Cause, unknown.

Friday, April, 28, 2.35 P. M. Still.

No. 413 Main Street. Owned by B. C. Welch as Hotel Harvard. No loss. Cause, hot ashes in barrel.

Saturday, April 29, 2.40 P. M. Still.

Second Street. Owned by T. H. Thurber as shed and fence. Loss, trifling. Originated on outside of building. Cause, burning rubbish.

Saturday, April 29, 5.35 P. M. Still.

Raymond Street. Cause, rubbish burning in City yard.

MAY.

Thursday, May 4, 4.12 A. M. Box 423.

No. 65 Auburn Street. Owned by Morss & Whyte as dwelling. No loss. Cause, hot ashes in barrel.

Saturday, May 6, 2.58 P. M. Box 271.

No. 2418 Massachusetts Avenue. Owned by C. A. Mason. Occupied by A. S. Lohnes & Co as blacksmith. Loss, trifling. Originated on the roof. Cause, sparks from fire used in setting tires.

Tuesday, May 9, 6.16 P. M. Box 36.

No. 93 Prospect Street. Owned by George Chaplin & Co. as unoccupied dwelling. Loss, $375. Insurance, $4,000. Originated in the attic. Cause, incendiary.

Wednesday, May 10, 3.04 A. M. Still.

Thorndike Street, rear. Occupied by H. M. Sawyer & Co. as belt manufactory. No loss. Originated in oiled waste in the yard.

Wednesday, May 10, 2.20 P. M. Still.

No. 39 Harvard Street. Occupied by John Duff as spring maker. Loss, slight. Originated on the roof. Cause, sparks from chimney.

Wednesday, May 10, 4.34 P. M. Box 29.

No. 358 Winsor Street. Occupied by S. A. McCready as dwelling. No loss. Cause, oil stove taking fire.

Wednesday, May 10, 8.10 P. M. Box 10.

No. 20 Thorndike Street. Owned and occupied by H. M. Sawyer & Co. as oil clothes manufactory. No loss. Originated in a barrel of clippings on first floor. Cause, spontaneous combustion.

Thursday, May 11, 4.10 P. M. Still.

Ninth Street. Pile of sleepers in yard of Boston and Albany Railroad Company. Loss, slight. Cause, sparks from locomotive.

Friday, May 12, 7.25 A. M. Still.

No. 14 Centre Street. Occupied by W. F. Osgood as dwelling. No loss. Cause, hot ashes in barrel.

Friday, May 12, 9.31 A. M. Box 26.

No 43 School Street. Occupied by Alice Blanchard as dwelling. Loss, slight. Originated in a curtain. Cause, child and matches.

Saturday, May 13, 10.40 P. M. Box 53.

Mt. Auburn Street. Cause, false alarm.

Tuesday, May 16, 8.19 A M. Box 26.

No. 659 Main Street. Owned by John Colbert. Loss, $100. Insurance, $3,000. Occupied by Jennie McIsaac as dry goods. Loss, $300. Insurance, $650. Originated in a box of paper. Cause, dropping of a lighted match.

Tuesday, May 16, 9.06 A M. Box 116.

No. 305 Third Street. Occupied by Peter McMurray as blacksmith. No loss. Originated in hay. Cause, sparks from forge.

Tuesday, May 16, 3.33 P. M. Box 29.

No 45 Webster Avenue. Owned by Rourke estate as stable. No loss. Originated on the outside of the building. Cause, children playing with fire.

Wednesday, May 17, 3.19 P. M. Box 25.

No. 16 Sidney Street. Owned by Julia Morgan. Loss, $205. Insurance, $1,400. Occupied by Julia Morgan, et al., as dwellings. No loss. Originated on the roof. Cause, sparks from a chimney.

Friday, May 19, 8.49 A. M. Box 26.

No. 806 Main Street Occupied by S. C. Pike as dwelling. Loss, slight Cause, towel on oil stove taking fire.

Friday, May 19, 3 P. M. Still.

Junction of River and Pleasant Streets. Cause, burning rubbish

Friday, May 19, 11.50 P. M. Box 71.

Yorktown Street. Owned by C. K. Barcley as unfinished dwelling. Loss, $400. No insurance. Cause, supposed of incendiary origin.

Sunday, May 21, 6.34 P. M. Box 137.

No. 1 Bancroft Street. Occupied by several families as dwellings. No loss. Originated in the cellar. Cause, hot ashes in barrel.

Sunday, May 21, 11.09 P. M. Box 134.

No. 249 Prospect Street. Owned by John Shuler. Loss, $300. Insurance, $150. Occupied by John Shuler as stable. Loss, $150. Insurance, $125. Owned by John Shuler as dwelling. Loss, $200. Insurance, $2,500.

No. 247 Prospect Street. Owned by L. A. Tower. Loss, $190. Insurance, $300. Occupied by several parties as stable. Loss, trifling. Owned by L. A. Tower as dwelling. Loss, $40. Insurance, $2,500. Originated in Shuler's stable. Cause, unknown.

Monday, May 22, 8.29 A. M. Box 62.

No 19 Storey Street. Owned and occupied by A. R. Balmer as dwelling. Loss, $59. Insurance, $4,000. Originated on second floor. Cause, oil stove taking fire.

Monday, May 22, 7.25 P. M. Still.

No. 22 Wendall Street. Occupied by Mrs. William Cushing as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, May 23, 9.40 P. M. Box 9.

No. 28 Otis Street. Owned and occupied by Irving & Casson as furniture manufactory. Loss, trifling Originated on fourth floor in the finishing room. Cause, spontaneous combustion.

Tuesday, May 23, 3.30 P. M Still.

No. 62 Hampshire Street. Occupied by H. F. Sparrow & Co. as confectioners. Cause, accidental automatic alarm.

Wednesday, May 24, 4.35 A. M. Still.

No. 356 Western Avenue. Owned and occupied by H. G. Davis as stable. No loss. Cause, oil stove taking fire.

Wednesday, May 24, 12.25 P. M. Still.

Central Square. Cause, an electric car afire. Loss, trifling.

Thursday, May 25, 11.27 A. M. Box 26.

No. 79 State Street. Owned by C. E. Smart. Loss, $400. Insurance, $1,500. Occupied by F. L. Howe as antique furniture manufacturer. Loss, $2,500. No insurance. Occupied by J. F. McDonald as furniture manufacturer. Loss, $200. Insurance, $600. Occupied by Cornelius Houghton as piano shops. Loss, $120. Insurance, $300. Occupied by S. H. Swain as wood worker. Loss $50. No insurance. Originated on 2nd floor. Cause, oil stove taking fire.

Thursday, May 25, 7.30 P. M. Still.

No. 49 North Street. Occupied by Patrick McCarthy as dwelling. No loss. Cause, soot in chimney afire.

Saturday, May 27, 12.39 A. M. Box 271.

Harvey Street. Freight car on track of Boston & Maine Railroad Co. Loss, $248. Insurance, $248. Cause, supposed of incendiary origin.

Saturday, May 37, 12.30 P. M. Still.

No. 104 Thorndike Street. Owned by T. E. Blake as dwelling. No loss. Cause, soot in chimney afire.

Saturday, May 27, 1.51 P. M. Box 9.

No 34 Cambridge Street. Owned by I. G. Felt as blacksmith shop. Loss, $30. Insurance, $1,600. Originated on the roof. Cause, sparks.

Saturday, May 27, 5.30 P. M. Still.

No. 10 Pleasant Street. Occupied by K. McRae as dwelling. Loss, $50. Insurance $500. Originated in bedclothes. Cause, child and matches.

Sunday, May 28, 3.42 A. M. Box 271.

No. 21–23 Harvey Street. Owned by Henry Audiffred. Loss, $1,500. No insurance. Occupied by John McVey as pottery. Loss, $50. No insurance. No. 19. Owned by P. R. Arsenault as dwelling Loss, $125. Insurance, $2,200. No. 25. Owned by J. H. Howard as dwelling. Loss, $350. Insurance, $1,500. The fire originated in the pottery. Cause, unknown.

Monday, May 29, 8.40 A. M. Still.

No. 39 Harvard Street. Owned and occupied by John Duff as spring maker. Loss, trifling. Originated on the roof. Cause, sparks.

Monday, May 29, 5.20 P. M. Still.

Ninth Street. Cause, burning rubbish on dump.

Wednesday, May 31, 11.23, 11.30, 11.48 A. M. Box 21.

No. 4 Bell Court. Owned by A. L. Nagle. Loss, $1,300. Insurance, $1,300. Occupied by Stephen Henue as dwelling. Loss, $500. No insurance. No. 2. Owned by Lawrence Dempsey. Loss, $739. Insurance $850. Occupied by Lawrence Dempsey as dwelling. Loss, $125. No insurance. Owned and occupied by Lawrence Dempsey as stable. Loss, $200. Insurance, $50. No. 6. Owned by James Henry. Loss, $814. Insurance, $1,000. Occupied by James Henry as dwelling. Loss, $600. Insurance, $300. No. 14. Owned by Thomas O'Hara. Loss, $1,300 Insurance, $1,500. Occupied by Thomas O'Hara as dwelling. Loss, $600. Insurance, $600. Owned by Thomas O'Hara. Loss, 400 Insurance, $400 Occupied by Thomas O'Hara as stable Loss, $325. Insurance, $325. Owned by Michael Fitzpatrick. Loss, $2,000. Insurance, $2,000. Occupied by Michael Fitzpatrick as stable. Loss, $379. Insurance, $1,500.

Sidney Street. Owned by estate of Bridget O'Hara. Loss, $153. Insurance, $2,500. Occupied by several families as dwellings. No loss. Owned by estate of Bridget O'Hara Loss, $1,500. Insurance, $1,500. Occupied by T. H. O'Hara as stable. Loss, trifling. Owned by John Nixon. Loss, $1,500. Insurance, $1,000. Occupied by John Nixon as stable. Loss, $3,000. Insurance, $2,000. Owned and occupied by John Nixon as stable. Loss, $5,000. No insurance.

Erie Street. Owned by J. C. Doherty. Loss, $2,000. Insurance, $2,000. Occupied by J. C. Doherty as dwelling. Loss, $350. Insurance, $350. Occupied by J. B. McPhee as dwelling. Loss, $500. Insurance, $500. Owned by J. C. Doherty. Loss, $1500. Insurance, $1 000. Occupied by J. C. Doherty as stable. Loss, $200. Insurance, $1,000. Owned by C W. Henderson. Loss, $1,000. Insurance, $1,000 Occupied by C. W. Henderson as stable and storehouse. Loss, $4,000. No insurance.

Waverly Street. Owned by T. A. Bailey. Loss, $488. Insurance, $1,000. Occupied by T. A. Bailey as dwelling. Loss, $250. No insurance. Owned by Mary Davrens. Loss, $500. Insurance, $600. Occupied by Mary Davrens as dwelling. Loss, $100. No insurance. Originated in a shed at No. 4 Bell Court. Cause, children and matches.

Wednesday, May 31, 11.52 A. M. Box 26.

Massachusetts Avenue. Owned by Charles River Park Association as grand stand. Loss slight. Originated on the roof. Cause, sparks.

JUNE.

Thursday, June 1, 12.37 P. M. Box 73.

No. 315 Rindge Avenue. Owned and occupied by David Trant as a hennery. No loss. Cause, children and matches.

Thursday, June 1, 1 P. M. Still.

No. 37 Porter Street. Occupied by Cornelius Holland as dwelling. No loss. Cause, soot in chimney afire.

Saturday, June 3, 10.45 P. M. Still.

No. 1 Cogswell Place. Occupied by Thomas Ready as dwelling. Loss, slight. Originated in a closet. Cause, unknown.

Sunday, June 4, 3.55 P. M. Still.

No. 16 South Street. Occupied by Mary McGowan as dwelling. No loss. Cause, soot in chimney afire.

Sunday, June 4, 8 P. M. Still.

No. 101 Amory Street. Occupied by J. P. Graham as dwelling. Loss, slight. Cause, overturning of a lighted lamp.

Wednesday, June 7, 4.15 A. M. Box 32.

No. 246–248 Columbia Street. Owned by Abraham Fuhrman, Loss, $150. Insurance, $900. Occupied by Abraham Fuhrman *et al.*, as stable and storage of rags. Loss, $572. No insurance. Supposed cause, spontaneous combustion.

Wednesday, June 7, 9.22 P. M. Box 61.

No. 74 Boylston Street. Cause, steam mistaken for fire.

Thursday, June 8, 2.11 P. M. Box 137.

No. 18 Hews Street. Owned and occupied by J. T. Battist as dwelling. Loss, $18. Insurance, $2,500. Cause, kerosene oil stove taking fire.

Thursday, June 8, 5.39 P. M. Box 9

No. 17 Second Street. Owned and occupied by J. L. Bailey as storage for furniture. Loss, trifling. Originated in rubbish in cellar. Cause, unknown.

Friday, June 9, 10.25 A. M. Still.

University Road. Occupied by Boston Elevated Railway Company as shed. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Sunday, June 11, 12.22 A. M. Box 10.

No. 84 First Street Owned by J. T. Scully. Loss, $800. Insurance, $1,000. Occupied by Ararat Kindling Wood Company. Loss, $1,200. No insurance. Cause, unknown.

Monday, June 12, 12 M. Still.

Deacon Street. Owned by estate of M. L. Smith as unused coal shed. No loss. Cause, set afire by boys.

Monday, June 12, 12.59 P. M. Box 43.

No. 16 Surrey Street. Occupied by Michael Doyle as dwelling. Loss, trifling. Originated in a curtain. Cause, child and matches.

Tuesday, June 13, 8.08 A. M. Box 34.

Nos. 294–296 Columbia Street. Owned by J. E. Dwyer. Loss, $400. Insurance, $1,500. Occupied by J. E. Dwyer as dwelling. Loss, $150 No insurance. Occupied by Alfred Mosher as dwelling. Loss, $50. Insurance, $300. Cause, kerosene oil stove taking fire.

Wednesday, June 14, 1.23 A. M. Box 73.

Harvey Street. Freight car on tracks of Boston & Maine Railroad Company. Loss, $164. Insurance, $164. Cause, supposed of incendiary origin.

Thursday, June 15, 8.24 P. M. Box 26.

No. 8 School Street Place. Occupied by Thomas Jordan as dwelling. No loss. Cause, breaking of a lighted oil lamp.

Friday, June 16, 4.51 P. M. Box 41.

No. 9 Laurel Street. Owned and occupied by G. E. Carruth as dwelling. Loss, $225. Insurance, $2,000. Originated on the roof. Cause, sparks.

Friday, June 16, 7.30 P. M. Box 31.

No. 752 Cambridge Street. Owned by Joseph Green. Loss, $27. No insurance. Occupied by Edgar Hammond as variety store. Loss, $50. No insurance. Originated amongst fireworks in window. Cause, unknown.

Saturday, June 17, 4.33 P. M. Box 12.

No. 202 Bridge Street. Owned by Sarah Dooley as dwelling. Loss trifling. Originated on the roof. Cause, fire crackers.

Saturday, June 17, 6.40 P. M. Still.

No. 46 Boylston Street. Owned by heirs of John Read as dwelling. Loss, trifling. Originated on the roof. Cause, fire crackers.

Saturday, June 17, 7.30 P. M. Still.

Hayes Street. Fence burning Cause, bonfire.

Saturday, June 17, 8.24 P. M. Box 115.

Munroe Street. Oil in a portable tank. Cause, set afire by boys.

Saturday, June 17, 8.47 P.M. Box 36.

No. 10 Essex Street. Owned by C. A. Simonds. Loss, $50. Insurance, $1,650. Occupied by A. M. Pratt as dwelling. No loss. Originated in the L. Cause, fire-crackers.

Sunday, June 18, 9.30 A. M. Box 137.

No. 18 Hews Street. Owned by J. T. Battist as dwelling. Loss, trifling. Originated on the roof. Cause, fireworks.

Tuesday, June 20, 9.39 A. M. Box 72.

No. 61 Cedar Street. Occupied by Frances Brown as dwelling. Loss, trifling. Cause, oil stove taking fire.

Wednesday, June 21, 2.15 P. M. Still.

No. 54 Garden Street. Occupied by C. L. Parsons as dwelling. No loss. Cause, oil stove taking fire.

Wednesday, June 21, 9.45 P. M. Box 14.

No. 1 Sixth Street. Owned by N. T. Dwyer. Loss, $85. Insurance, $2,000. Occupied by Alfred Gibbs as dwelling. Loss, $6. Insurance, $1,000. Originated in the L. Cause, defective chimney.

Thursday, June 22, 10.50 A. M. Still.

No. 185 Cambridge Street. Occupied by John Markey as dwelling. No loss. Cause, clothes near stove taking fire.

Thursday, June 22, 11.29 A. M. Box 137.

No. 300 Western Avenue. Occupied by Joseph Manuel as dwelling. No loss. Cause, oil stove taking fire.

Friday, June 23, 1.48 P. M. Box 36.

No. 134 Austin Street. Occupied by W. S. Clement as dwelling. Loss, trifling. Originated in the cellar. Cause, hot ashes in barrel.

Friday, June 23, 10.59 P. M. Box 23.

No. 42 Pearl Street. Occupied by Mrs. G. A. Barrow as millinery goods. Loss, $75. Insurance, $1,000. Cause, overturning of a lighted lamp.

Sunday, June 25, 11.31 A. M. Box 145.

No. 948 Massachusetts Avenue. Owned by Marshal Larner. Loss, $165. Insurance, $4,000. Occupied by Marshal Larner as dwelling and furrier. Loss, $3,300. Insurance, $5,500. Originated on the third floor. Cause, unknown.

Tuesday, June 27, 4.47 A. M. Box 48.

No. 1220 Cambridge Street. Owned by Nathan Tarlinski. Loss, $240. Insurance, $28,000. Occupied by J. R. McKenzie as bakery. Loss, $232. Insurance, $1,000. Cause, boiling fat taking fire.

Tuesday, June 27, 11.26 P. M. Still.

No. 575 Massachusetts Avenue. Cause, burning of an awning.

Thursday, June 29, 10.46 A. M. Box 87.

No. 67 New Street. Owned by Julian Dusault as shed. Loss, trifling. Cause, sparks from a locomotive.

Friday, June 30, 6.17 P. M. Box 13.

No. 96 Otis Street. Occupied by G. H. Kelley as dwelling. No loss. Cause, oil stove taking fire.

JULY.

Saturday, July 1, 6.02 P. M. Box 17.

No. 11 Burleigh Street. Owned by G. M. Rogers estate. Occupied by several families as dwellings. No loss. Originated in the cellar. Cause, unknown.

Monday, July 3, 10.36 P. M. Box 24.

Brookline Street. Occupied by Michael O'Neil as stable. No loss. Cause, set afire by boys.

Tuesday, July 4, 12.43 P. M. Box 78.

No. 4 Sherman Street. Occupied by C. E. Larson as dwelling. No loss. Cause, hot ashes in barrel.

Tuesday, July 4, 3.20 P. M. Still.

No. 46 Third Street. Occupied by Henry White as dwelling. Loss, trifling. Originated on the roof. Cause, fire-crackers

Tuesday, July 4, 3.44 P. M. Box 126.

No. 68 Cherry Street. Owned by Estate of Alma Steinmann as dwelling. Loss, slight. Originated on the roof. Cause, fire-crackers.

Tuesday, July 4, 7.31 P. M. Box 153.

No. 36 Grant Street. Occupied by T. J. Purslow as dwelling. Loss, slight. Originated in a mattress on the roof. Cause, fire-crackers.

Tuesday, July 4, 8.17 P. M. Box 26.

No. 771 Main Street. Occupied by John Lynch as dwelling. No loss. Originated on the roof. Cause, fire-crackers.

Tuesday, July 4, 8.55 P. M. Box 168.

No. 27 Cogswell Avenue. Owned by J. P. Glynn as stable. Loss, slight. Originated on the roof. Cause, fire-crackers.

Tuesday, July 4, 9.40 P. M. Still.

No. 183 Cambridge Street. Owned by J. L. Bailey as dwelling. Loss, trifling. Originated on the roof. Cause, firecrackers.

Wednesday, July 5, 8.40 A. M. Box 42.

No. 33 Fairmont Avenue. Owned by A. N. Chapin as dwelling. Loss, trifling. Originated on the roof. Cause, sparks.

Wednesday, July 5, 2.50 P. M. Box 14.

No. 622 Cambridge Street. Owned by A. P. Armstrong. Loss, $500. Insurance, $4,000. Occupied by W. D. Lynch as groceries and provisions. Loss, $1,124. Insurance, $1,800. Originated in rear end of store. Cause, unknown.

Wednesday, July 5, 9.35 P. M. Still.

No. 50 Highland Avenue. Owned by Josiah Quincy as dwelling. No loss. Cause, fire balloon dropping on to the roof.

Wednesday, July 5, 9.43 P. M. Box 43.

No. 39 Putnam Avenue. Owned by J. B. Apthrop as dwelling. No loss. Originated on the roof. Cause, skyrocket.

Friday, July 7, 9.08 P. M. Box 168.

No. 206 Elm Street. Owned by A. S. Stevens. Loss, $233. Insurance, $1,500. Occupied by C. A. Osborn as dwelling. Loss, $50. Insurance, $500. Originated in a shed attached to the house. Cause, unknown.

Monday, July 10, 1.50 A. M. Still.

No. 869 Main Street. Owned by F. S. Pratt. Loss, $94. Insurance, $4,950. Occupied by C. J. Moore as clothes cleaner. Loss, $150. Insurance, $250. Cause, unknown.

Tuesday, July 11, 9.12 A. M. Box 134.

No. 20 Carlisle Street. Owned by J. E. Huntress. Loss, $45. Insurance, $2,000. Occupied by Jacob Moore as dwelling. Loss, slight. Cause, child and matches.

Tuesday, July 11, 1.15 P. M. Box 74.

No. 147 Sherman Street. Grass afire. Cause, spark from locomotive.

Tuesday, July 11, 4.08 P. M. Box 9.

No. 34 Cambridge Street. Owned by I. G. Felt as blacksmith shop. Loss, $10. Insurance, $400. Originated on the roof. Cause, sparks from chimney.

Wednesday, July 12, 7.45 P. M. Still.

No. 893 Main Street. Occupied by Egnatz Klien as clothing store. Loss, $21. Insurance, $2,000. Cause, gas jet igniting netting in window.

Thursday, July 13, 7.40 P. M. Box 27.

No 180 Winsor Street. Occupied by A. R. Buck as dwelling. No loss. Cause, oil stove taking fire.

Wednesday, July 19, 9.38 A. M. Box 35.

Nos. 57 and 59 Essex Street. Owned by J. M. Robbins as unfinished dwellings. Loss, $1,508. Insurance, $4,000. Cause, upsetting of a plumber's lamp.

Thursday, July 20, 3.21 P. M. Box 27.

No. 102 Clark Street. Owned by Annie Johnson. Loss, $166. Insurance, $2,000. Occupied by Annie Johnson as dwelling. Loss, $197. Insurance, $500. Originated in the cellar. Cause, unknown.

Thursday, July 20, 7.41 P. M. Box 15.

Fifth Street. Could find no cause for the alarm.

Thursday, July 20, 9.31 P. M. Box 115.

No. 265 Third Street. Occupied by G. F. Blake Manufacturing Company. Loss, trifling. Originated in the oil and paint room. Cause, spontaneous combustion.

Friday, July 21, 12.20 P. M. Still.

No. 221 Prospect Street. Occupied by J. W. Mahady as dwelling. No loss. Cause, oil stove taking fire.

Friday, July 21, 3.14, 3.16 P. M. Boxes 42, 442.

No. 364 River Street. Owned by J. A. Granstrom. Loss, $500. Insurance, $500. Occupied by J. A. Granstrom as blacksmith. Loss, $900. Insurance, $1,000.

No 370. Owned by W. F. Holmes. Loss, $700. Insurance, $700. Occupied by J. J. Fritz as carriage painter. Loss, $290. Insurance, $400.

Nos. 338–340. Owned by West End Street Railway Company. Loss, $8,855. Insurance, $8,200. Occupied as carhouse and stable. Loss, $6,035. Insurance, $6,035.

Nos. 328 to 334. Owned by Estate of J. A. Holmes. Loss, $2,400. Insurance, $2,500. Occupied by James Langford, *et al.*, as dwellings. Loss, $1,465. Insurance, $1,000.

Nos. 319 to 325. G. W. Gale, *et al.*, Trustees. Loss, $41. Insurance, $3,500. Occupied by several families as dwellings. No loss.

Nos. 374 to 378. Owned by W. F. Holmes. Loss, $100. Insurance, $2,500. Occupied by W. F. Holmes as hay and grain. Loss, $75. Insurance, $2,500.

No. 2 Blackstone Street. Owned and occupied by J. S. McMahon as restaurant. Loss, $75. Insurance, $400. Originated in the rear of and on the outside of J. A. Granstrom's blacksmith shop. Cause, unknown.

Friday, July 21, 3.20 P. M. Box 87.

Concord Avenue. Haystack. Loss, trifling. Cause, sparks from locomotive.

Friday, July 21, 3.41 P. M. Box 137.

No. 1 Ballard Place. Owned by Mary Knowlton. Loss, $582. Insurance, $1,200. Occupied by Mary Knowlton as dwelling. Loss, $175. Insurance, $300.

No. 2. Owned by J. J. Blevins as dwelling. Loss, $45. Insurance, $1,000.

No. 3 Owned by S. G. Harding. Loss, $400. No insurance. Occupied by S. G. Harding as stable and storage of paper. Loss, $700. Insurance, $700.

No. 5. Owned by J. J. Blevins. Loss, $800. Insurance, $800. Occupied by J. J. Blevins as stable. Loss, $460. Insurance, $1,000.

Nos. 3–5 Blackstone Street. Owned by D. F. Burns as dwellings. Loss, $40. Insurance, $2,500.

Nos. 316–318 Western Avenue. Owned and occupied by Ellen McCaffrey as dwelling. Loss, $32. Insurance, $4,000.

Nos. 1–2 Pond Place. Owned by Estate of J. R. Rhoades as dwellings. Loss, $75. Insurance, $2,000.

No. 7 Dodge Street. Owned by F. R. Murdock as dwelling. Loss, $11. Insurance, $2,000.

No. 11. Owned by J. H. McDermott as dwelling. Loss, $24. Insurance, $1,400. Originated from sparks and exposure from River Street fire.

Friday, July 21, 3.58 P. M. Box 145.

No. 342 Green Street. Owned by Mrs D. Holloran as dwelling. Loss, $25. Insurance, $1,500. Originated on the roof. Cause, sparks from burning buildings.

Saturday, July 22, 9 P. M. Still.

No. 21 Church Street. Owned by William Balmer. Loss, $100. Insurance, $2.000. Occupied by John Waugh & Co. as carpenters. Loss, $122. Insurance, $500. Originated in pile of sweepings on second floor. Cause, unknown.

Wednesday, July 26, 11.31 A. M. Box 24.

No. 4 Decatur Street. Occupied by J. V. Latour as dwelling. Loss, slight. Originated in a mattress in attic. Cause, child and matches.

Friday, July 28. 1.50 P. M. Box 8.

Prison Point Street, Railroad Yard. Owned by Pullman Palace Car Company as sleeping car. Loss, trifling. Originated in gas holder under the car.

Saturday, July 29, 12.04 P. M. Box 176.

No. 19 Bellevue Avenue. Occupied by J. S. Cranston as dwelling. Loss, slight. Cause, oil stove taking fire.

Saturday, July 29, 8.24 P. M. Box 27.

No. 41 Dickinson Street. Occupied by Catherine Hogan. Loss, slight. Cause, breaking of a lighted oil lamp.

Saturday, July 29, 9.52 P. M. Box 31.

No. 722 Cambridge Street. Occupied by Louis Des Rosiers as grocery. No loss. Originated in old barrels in the yard. Cause, unknown.

Sunday, July 30, 1.29 A M. Box 12.

No. 211 Bridge Street. Owned by J. A. Wellington estate. Loss, $3,000. Insurance, $3,000. Occupied by Wellington & Buck as coal sheds. Loss, $1,530. Insurance, $4,000. No 221. Owned and occupied by Metropolitan Coal Company as engine room. Loss, $800. Insurance, $2,800. Originated in coal sheds. Cause, unknown.

Monday, July 31, 12.36 A. M. Box 59.

No 1310 Massachusetts Avenue. Owned by J. M. Hilton. Loss, $125. Insurance, $20,000. Occupied by Oak Grove Creamery Company as lunch room. Loss, $50. Insurance, $1,500. Originated under stairs in basement. Cause, unknown.

Monday, July 31, 6.11 A. M. Box 134.

No. 167 Tremont Street. Owned by Daniel Mooney as dwelling. Loss, $20. Insurance, $6,000. Cause, defective chimney.

AUGUST.

Wednesday, Aug. 2, 9.15 A. M. Box 145.

No. 45 Jay Street Owned by Newell Chamberlain as dwelling. No loss. Cause, soot in chimney afire.

Thursday, Aug. 3, 10.28 A. M. Box 145.

No. 348 Green Street Occupied by Vitaline Osborn as dwelling. Loss, slight Cause, oil stove taking fire.

Thursday, Aug. 3, 3.35 P. M. Box 26.

No. 39 School Street. Owned by E. D. Brooks as dwellings. No loss. Cause, children setting fire to paper in elevator well.

Thursday, Aug. 3, 11.05 P. M. Box 116.

No. 319 Third Street. Owned by J. M. Knapp. Loss, $500. No insurance. Occupied by Katie Baron as junk. Loss, $500. No insurance. Cause, supposed of incendiary origin.

Sunday, Aug. 6, 12.25 P. M. Still.

No. 52 Rice Street. Fence afire. Cause, grass burning.

Wednesday, Aug. 9, 9.52 A. M. Box 49.

No 1607 Cambridge Street. Owned and occupied by Thomas Henry as lunch room. No loss. Cause, oil stove taking fire.

Friday, Aug. 11, 12.16 P. M. Box 29.

No. 87 Plymouth Street. Ash barrel in yard afire. Cause, hot ashes.

Sunday, Aug. 13, 11.26 P. M. Box 29.

No. 74–76 Plymouth Street. Owned by Washington Associates. Loss, $525. Insurance, $9,000. Occupied by W. H. H. Brady as dwelling. Loss, $420. Insurance, $1,000. Occupied by D. F. Short as dwelling. Loss, $70. Insurance, $500. Originated in clothes closet in attic. Cause, unknown.

Tuesday, Aug. 15, 4 P. M. Box 29.

No. 121 Webster Avenue. Occupied by F. F. Bowen as dwelling. No loss. Cause, pot of meat on stove taking fire.

Tuesday, Aug. 15, 7.50 P. M. Box 74.

No. 12 Bolton Street. Owned and occupied by J. T. Vocell as stable. No loss. Cause, dropping of a lighted lamp.

Wednesday, Aug. 16, 8.15 P. M. Box 26.

Winsor Street. Cause, rubbish on dump burning.

Thursday, Aug. 17, 5.02 P. M. Box 74.

No. 79 Sherman Street. Owned by Thomas Savalle. Loss, $300. Insurance, $300. Occupied by Thomas Savalle as blacksmith. Loss, $200. Insurance, $200. Originated on outside of building. Cause, spark from forge.

Thursday, Aug. 17, 8.20 P. M. Still.

No. 70 Winthrop Street. Owned by J. M. Hilton. Loss, $85. Insurance, $1,000. Occupied by J. J. Hawkes as dwelling. Loss, $83. Insurance, $1,000. Cause, paper shade on lamp taking fire.

Saturday, Aug. 19, 12.10 P. M. Box 26.

No. 2 School Place. Occupied by Carl Lilgeholm as wood carving. Loss, slight. Cause, oil stove taking fire.

Wednesday, Aug. 23, 2.28 P. M. Box 26.

No. 160 Massachusetts Avenue. Owned and occupied by T. F. Quinn as lunch wagon. Loss, $100. No insurance. Cause, oil stove taking fire.

Thursday, Aug. 24, 7.50 P. M. Box 68.

No. 1876 Massachusetts Avenue. Owned by J. S. Becker & Co. Loss, $150. Insurance, $4,000. Occupied by J. S. Becker & Co. as groceries and provisions. Loss, $225. Insurance, $2,000. Originated in the cellar. Cause, supposed from a lighted oil lamp.

Monday, Aug. 28, 7.25 A. M. Box 21.

No. 600 Putnam Avenue. Occupied by Michael Neilon as dwelling. No loss. Originated in paper in the cellar. Cause, child and matches.

Monday, Aug. 28, 10.06 A. M. Box 42.

No. 3 Somerset Street. Owned by S. N. Sawin as dwellings. Loss, $20. Insurance, $2,500. Originated on outside of building. Cause, children playing with fire.

Wednesday, Aug. 30, 11.10 A. M. Still.

No. 22 Pioneer Avenue. Owned by John Black. Loss, $15. Insurance, $1,500. Occupied by James O'Donnell as dwelling. No loss. Cause, oil on floor igniting.

Wednesday, Aug. 30, 6.14 P. M. Box 9.

Cambridge Street. Cause, electric car taking fire.

SEPTEMBER.

Saturday, Sept. 2, 10.23 P. M. Box 12.

No. 204 Bridge Street. Owned by Sarah Dooley as dwelling. No loss. Cause, oil lamp taking fire.

Thursday, Sept. 7, 1.40 P. M. Box 75.

Walden Street. Cause, false alarm given by malicious boy.

Thursday, Sept. 7, 6.34 P. M. Box 17.

No. 54 Washington Street. Owned by Virgil Richardson. Loss, $20. Insurance, $1,500. Occupied by Virgil Richardson as dwelling. Loss, $45. Insurance, $500. Cause, explosion of an oil lamp.

Friday, Sept. 8, 7.19 P. M. Box 137.

No. 298 Western Avenue. Occupied by Daniel McInnis as dwelling. Loss, slight. Cause, explosion of an oil lamp.

Sunday, Sept. 10, 2.48 P M. Box 78.

No. 4 Sherman Street. Owned by M. A. Mathews as dwelling. No loss. Originated under the sink on first floor. Cause, mice and matches.

Thursday, Sept. 14, 4.35 P. M. Still.

No. 186 Thorndike Street. Owned by Robert Weitze. Loss, $25. Insurance, $3,000. Occupied by J. B. Wegeler as dwelling. Loss, $50. No insurance. Originated in a clothes closet. Cause, child and matches.

Friday, Sept. 15, 5.37, 5.44 P. M. Box 68.

No. 815 Somerville Avenue. Owned by J. C. Bancroft. No loss. Occupied by J. J. Jonsburg as painter. Loss, $250. No insurance. Occupied by J. J. Guiney *et als.*, as storage. Loss, $150 No insurance. No. 817 Somerville Avenue. Owned by J. J. Guiney as stable. Loss, $300. Insurance, $3,500. Originated in the Bancroft Building. Cause, supposed by spontaneous combustion.

Friday, Sept. 15, 7.42 P. M Box 26.

No. Windsor Street. Occupied by H. H. McInnis as dwelling. Loss, slight. Cause, gas jet igniting curtain.

Saturday, Sept. 16, 11.40 A. M. Still.

No. 46 Second Street. Owned by Louis Goldstein as dwelling. Loss, trifling. Originated on the roof. Cause, sparks.

Saturday, Sept. 16, 11.46 P. M. Box 139.

No. 9 Walnut Court. Owned by J. F. Cronin. Loss, $115. Insurance, $1,000. Occupied by J. F. Cronin as dwelling. Loss, $30. No insurance. Cause, supposed by the dropping of a lighted match.

Monday, Sept. 18, 1.57 P. M. Box 78.

No. 205 Appleton Street. Occupied by John Fitzgibons as dwelling. Loss, $25. Insurance, $300. Originated in bedclothes. Cause, child and matches.

Tuesday, Sept. 19, 8.56 A. M. Box 32.

No. 414 Columbia Street. Occupied by Dennis Murphy as dwelling. No loss. Cause, mice nibbling at matches in vest pocket.

Tuesday, Sept. 19, 8.59 P. M. Box 34.

No. 105 Hampshire Street. Occupied by David Heneu as dwelling. No loss. Cause, overturning of a lighted lamp.

Wednesday, Sept. 20, 11.35 A. M. Still.

No. 4 Berkeley Street. Occupied by Jeremiah Smith as dwelling. No loss. Cause, soot in chimney afire.

Thursday, Sept. 21, 10.32 A. M. Box 17.

No. 557 Main Street. Owned by estate of G. M. Rodgers as dwellings. No loss claimed. Originated in the cellar. Cause, supposed by the dropping of a lighted match.

Saturday, Sept. 23, 11.11 A. M. Box 38.

No. 45 Magazine Street. Occupied by Robert Smith as dwelling. Loss, trifling. Originated in a lounge. Cause, boy and lighted match.

Wednesday, Sept. 27, 7.47 P. M. Box 21.

No. 635 Putnam Avenue. Occupied by Joseph Carberry, *et als.*, as dwellings. No loss. Originated in the cellar. Cause, supposed to have been set afire by a boy.

Saturday, Sept. 30, 1.11 A. M. Box 31.

No. 689 Cambridge Street. Owned and occupied by Warner & Spring as lunch car. Loss, $125. No insurance. No. 691. Owned by C. C. DeLacerdo as dwellings and store. Loss, $180. Insurance, $2,000. Originated in lunch car. Cause, gasoline stove taking fire.

Saturday, Sept. 30, 11.03 A.M. Box 36.

No 18 Western Avenue. Owned by Cambridge Real Estate Association. Loss, $2,053. Insurance, $2,500. Occupied by William Janes as blacksmith. Loss, $209. Insurance, $400. No. 13–15 River Street. Occupied by H. L. Rose as plumber. Loss, $175. Insurance, $600. No 17. Occupied by S. E. Jeffrey, as stairbuilder. Loss, $260. Insurance, $200. Occupied by C. F. Davis as gilder. Loss, $100. Insurance, $100. Occupied by G. W. Wiggin as cabinet maker. Loss, $400. Insurance, $400. Occupied by G. D. Stacy as painter. Loss, $37. Insurance, $150. Originated on second floor. No. 18 Western Avenue. Cause, thought to have been of incendiary origin.

OCTOBER.

Tuesday, October 3, 7.50 A. M. Still.

No. 4 Pioneer Street. Owned by Joseph Viles as unoccupied dwelling. No loss. Originated in rubbish in cellar. Cause, unknown.

Thursday, Oct. 5, 12.26 P. M. Box 93.

No. 652 Huron Avenue. Owned by Michael Kelley. Loss, $25. Insurance, $1,000. Occupied by Michael Kelley as dwelling. Loss, $10. Insurance, $500. Originated in wood box near stove. Cause, unknown.

Friday, Oct. 6, 7.30 A. M. Still.

No. 45 Orchard Street. Occupied by G. C. Wiswell as dwelling. No loss. Originated in a box of shavings in the shed. Cause unknown.

Saturday, Oct. 7, 2.05 A. M. Still.

No. 1348 Cambridge Street. Occupied by Tobin Brothers as stable. Loss slight. Originated in hay loft. Cause, carlessness of stableman.

Saturday, Oct. 7, 12.18 P. M. Box 36.

No. 649 Massachusetts Avenne. Owned by F. S. & C. H. Pratt. Loss, $65 Insurance, $19,000. Occupied by William Milligan as dentist. Loss, $38. Insurance, $400. Cause, gas jet igniting woodwork.

Wednesday, Oct. 11, 9.18 P. M. Box 75.

No. 287 Walden Street. Owned and occupied by M. W. Sands as brick manufactory. Loss, trifling. Cause, overheated kiln.

Thursday, Oct. 12, 5 31 P. M. Box 21.

No. 635 Putnam Avenue. Occupied by Helen Siedler as dwelling. Loss, $5. Insurance, $400. Originated in a bed. Cause, unknown.

Saturday, October 14, 2.40 A. M. Still.

No. 787 Main Street Occupied by Richard Dewey as lunch wagon. Loss trifling. Cause, gasoline stove taking fire.

Thursday, Oct. 19, 6.15 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Thursday, Oct. 19, 11.13 P. M. Box 68.

Massachusetts Avenue. Cause, burning of a temporary shelter on bridge at Porters Station.

Monday, Oct. 23, 11.15 A. M Still.

Prospect Street. Cause, electric car afire.

Wednesday, Oct. 25, 6.17 A. M. Box 414.

No. 71 Ninth Street. Owned by Goepper Brothers Co. Loss, $786. Insurance, $3,500. Occupied by Goepper Brothers Co. as barrel manufactory. Loss, $2,298. Insurance, $23,000. Originated in the first floor, and extended to drying kilns. Cause, sparks from stove.

Thursday, Oct. 26, 5.53 P. M. Box 9.

Bent Street. Owned by J. T. Scully. Loss, trifling. Insurance, $2,000. Occupied by Independent Bundle Wood Co. No loss. Originated in the roof of boiler-room. Cause, sparks from furnace.

Friday, Oct. 27, 5.36 P. M. Box 24.

No. 34½ Lopez Street. Occupied by Frederick Deckharte as dwelling. Loss slight. Cause, overturning of lighted lamp.

Monday, Oct. 30, 10 A. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Monday, Oct. 30, 5.40 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

NOVEMBER.

Wednesday, Nov. 1, 8.51 P. M. Box 46.

No. 740 Massachusetts Avenue. Owned by F. W. Bird. Loss, $60. Insurance, $5000. Occupied by G. C. Darlow as dwelling. No loss claimed. Insurance, $1,000. Originated in the basement. Cause, unknown.

Monday, Nov. 6, 3.25 P. M. Still.

No. 115 Pleasant Street. Owned by Mrs. John Grinham as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, Nov. 7, 9.55 A. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Tuesday, Nov 7, 8.40 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Tuesday, Nov. 7, 10.27 P. M. Box 34.

No. 49 Market Street. Owned by A. E. Smith. Loss, $35. Insurance, $3,000. Occupied by Arthur Cole as dwelling. No loss. Cause, rats and matches.

Wednesday, Nov. 8, 9.15 A. M. Still.

No. 358 Main Street. Cause, kettle of tar taking fire.

Wednesday, Nov. 8, 8.05 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Saturday, Nov. 11, 2.45 P. M. Box 53.

No. 25 Holyoke Street. Owned by G. C. Buckland. Loss, $203. Insurance, $8,500. Occupied as students' rooms. Loss trifling. Originated in the cellar and extended to second floor. Cause, unknown.

Saturday, Nov. 11, 11.05 P. M. Box 53.

No. 9 Linden Street. Cause, soot in chimney afire.

Thursday, Nov. 16, 6.52 P. M. Box 29.

No. 199 Clark Street. Occupied by Michael Lyons as dwelling. Loss, $19. Insurance, $500. Cause, overturning of a lighted lamp.

Saturday, Nov. 18, 6.11 P.M. Box 71.

Clarendon Avenue. Fire in Somerville. Assistance rendered.

Wednesday, Nov. 22, 2.56 P. M. Box 36.

No. 110 Austin Street. Cause, smoke mistaken for fire.

Saturday, Nov. 25, 11.30 A. M. Still.

No. 320 Main Street. Occupied by Simon Krefnosky as carpenter. No loss. Cause, shavings around stove taking fire.

Saturday, Nov. 25, 1 P. M. Box 65.

No. 15 Sacramento Street. Owned by Harvard College. Loss, $15. Insurance, $6,000. Occupied by C. S. Stiles as dwelling. No loss. Cause, dropping of a lighted match.

Monday, Nov. 27, 5.15 P. M. Still.

No. 40 Ninth Street. Occupied by R. F. McGrath as dwelling. Loss, $20. No insurance. Originated in a couch. Cause, dropping of a lighted match.

Tuesday, Nov. 28, 4.30 P. M. Still.

No. 97 Mt. Auburn Street. Occupied as club house. No loss. Cause, soot in chimney afire.

Tuesday, Nov. 28, 4.38 P. M. Box 25.

No. 49 Columbia Street. Owned by J. R. Murphy. Loss, $75. Insurance, $3,000. Occupied by Emil Edman as dwelling. Loss, $100. Insurance, $1,200. Originated in a lace curtain. Cause, child and matches.

Wednesday, Nov. 29, 4.22 P. M. Box 29.

No. 45 Webster Avenue. Owned by P. F. Rourke. Loss, $15. Insurance, $400. Occupied by Patrick Shannahan as stable. No loss. Originated on the outside of the building. Cause, children playing with fire.

REPORT OF THE TRUSTEES OF THE SANDERS TEMPERANCE FUND.

To the Honorable, the City Council: —

The Trustees of the Sanders Temperance Fund submit the thirty-fourth annual report in reference to this foundation.

The duties of the Board are not executive in character, and it is the nominal custodian only of the money bequeathed to the City by Charles Sanders in the year 1864. The sum of $10,000.00 was deposited with the City Treasurer by the executors of the will, and was not set aside at the time but was absorbed into the treasury.

The story of this gift has been many times related in former reports, to which reference may be made by those desirous of information upon the subject. The City Councils of past years have sought to comply with the wishes of the donor so far as they could be interpreted from the terms of the will. A missionary has served the City under its requirements during all the years since the receipt of the money.

Mr. James Hicks, who now exercises this function, has labored incessantly in behalf of the reformation of persons addicted to the use of intoxicating liquors, and it is believed that his efforts have been productive of much good. His work consists of daily visits to the courts as a friend of unfortunate drunkards, as well as visits to their equally unfortunate families, giving counsel and aid to the extent of his power. He has held and addressed many meetings in the interest of temperance reform, and his labors in that behalf have been untiring.

His report which accompanies this recites the tale of his faithful service, and gives assurance that he has earnestly endeavored to fulfil the manifest wishes of the philanthropic donor of this fund.

EDGAR R. CHAMPLIN,
WALTER C. WARDWELL,
WILLIAM F. BROOKS.
} *Trustees of the Sanders Temperance Fund.*

CAMBRIDGE, MASS., December, 1899.

To the Trustees of Sanders Temperance Fund: —

GENTLEMEN: — In accordance with your requirements and past custom, I hereby present the report of my labors during the year past.

I have devoted my full time and all the resources at my command to

carry out the wishes of the founder of this fund, whose great desire was "To reform old drunkards, to prevent new drunkards, and to abolish, as far as possible, the use of intoxicating drinks."

It gives me great pleasure to state that no backward steps have been taken in this regard during the past year. Many are the blessings that have crowned the efforts put forth, not only to the individual worked with, but also to the home represented. I have the pleasure of seeing changes for the better in very many homes through the taking and keeping the pledge of total abstinence. The men who have been redeemed from the bondage of strong drink have united with me in the work of reforming their fallen brothers. We have shown a united front, and have been most successful in warring against the tyrant alcohol. Hundreds of homes have been blessed, whole families have been saved from intemperance, happiness and joy have come to the home where, but a short time before the pledge was taken, misery and want existed as is always the case when men are bound by the chains of intoxication.

The results of earnest and painstaking effort during the year just past give one renewed encouragement for the year to come in the work of reform.

DISTRICT COURT.

I have followed up the old custom of attending daily the sessions of our District Court. It is here that I find my work and my opportunity to reach the fallen. Men come here to answer the charge of non-support. Through the kindness of the Court, in his desire to help these unfortunate ones, their cases are continued, generally. I follow them up and am very often rewarded beyond my expectations. The pledge is taken at once, and almost invariably the whole face of the home changes for the better. It is very, very seldom that these complaints for neglect of wife and family are again brought to the notice of the Court after the order for discharge has been given, which goes to show that the lesson and pledge have had an effect.

In cases of drunkenness, where I have asked for it, the judge has kindly granted a continuance, thereby giving me a chance to work with. In most of these cases I am rewarded by seeing them lead a sober, respectable life.

I will now give a brief summary of my work during the year.

PUBLIC TEMPERANCE MEETINGS.

I have assisted in conducting two hundred and thirty-seven (237) public temperance meetings at the following times and places :

Gospel Temperance Meeting, Sunday, 3 P. M., T. of H. Hall; Cam-

bridge Reform Club, Sunday, 7.30 P. M., Raymond Hall; Hope Social Temperance Club, Monday, 7.30 P. M., Hope Church; East End Temperance Guild, Wednesday, 7.30 P. M., East End Union Hall; Harvard Reform Club, Saturday, 7.30 P. M., T. of H. Hall. In addition to these public reform clubs, there are two Temples of Honor for men, one meeting Tuesday and the other Friday evenings, with a membership of 140; the W. C. T. U., the Social Temple and the Good Templars all materially aiding the cause of temperance. The public meetings are all largely attended, very often seating capacity not being sufficient for those who desire to attend. At these meetings the pledge is always offered to those who are not total abstainers, and during the year over seven hundred (700) persons, mostly men, have signed it. I am safe in saying that never before has the temperance movement been so flourishing as at present. "May the good work go on."

HOUSE OF CORRECTION.

Services are conducted here every Sunday at 9 A. M., which I regularly attend. I have collected during the year hundreds of thousands of pages of literature which I see distributed to the prisoners every Sunday morning as they pass out of the chapel. I have made many visits to prisoners during the year, and am glad to say I know of many who have gone forth to their homes better and wiser men with a determination to lead temperate lives.

VISITS MADE.

I have made two thousand, one hundred and three (2,013) visits to the homes of unfortunates and those who have reformed. Many of these homes I have entered with a sad heart, sometimes meeting the sad, heart-broken mother, with a large family, the husband serving time for drunkenness, or having deserted them through the curse of drink. In such cases I have often lifted my heart to God and said, "How long shall this enemy triumph over us?" Again I have visited the homes of the reformed, where the slave of many a year has broken the chains that bound him to intemperance and he stands forth a free man, as God made him. Oh! what a change there is in such a home! May God grant this change to many more homes of the desolate that I have visited during the year.

CAST OFF CLOTHING.

Through the kindness of the charitably disposed, who kindly responded to my appeal through the press for cast off clothing, I have been able to assist nearly one hundred families with articles of clothing,

much needed, and for which they were deeply grateful. I shall continue the work this winter and endeavor to make some poor men presentable, so that they, with their wives, may come to our meetings. Unless helped in this way they must stay at home.

NO LICENSE.

It is needless to say that my heart is full of gratitude to the Giver of every good and perfect gift, that He has once more put it into the hearts of our citizens to vote the liquor shops out of our City. If the pitfall was opened amongst us, many of our poor reformed men would be unable to resist the temptation, and would soon be drawn back to their cups. May God grant that that day may never come to our beloved City.

In conclusion, I wish to express my thanks to all who have aided me in my work. I have had many encouraging words from the rich and poor alike. All the temperance organizations have been with me in my work, and together we have achieved a glorious victory in the salvation of very many of our fellowmen from the curse of drink.

Respectfully submitted,

JAMES HICKS,
Missionary Sanders Temperance Fund.

REPORT OF INSPECTOR OF MILK

December 1, 1899.

To His Honor, the Mayor, and the City Council of the City of Cambridge: —

Gentlemen: I have the honor to present the Report of the Department of Milk Inspection for the year ending November 30, 1899.

There have been two changes this year in the milk law, one reducing the standard for pure milk to 12 per cent of milk solids and 3 per cent of fat during the month of September, making it correspond with the amount of milk solids and fat required during the months of April, May, June, July, and August; while for the rest of the year 13 per cent of milk solids and 3.7 per cent of fat are required. The other change or rather addition to the law, requires the Inspector to mail to each person from whom a sample of milk is taken for analysis, a copy of the analysis within ten days from the time the sample was taken; there is, however, no penalty attached to a non-compliance with this requirement.

I have always thought that a standard of 12 per cent of milk solids with 3 per cent of fat was too low for good milk at any time of year, as it, in my opinion, permits a certain amount of cream to be taken from milk of average quality, and still such partly skimmed milk will come up to the required standard. The claim, however, that milk is of as poor quality during September as at any time of year seems to be true, so that if the standard is to be reduced for any of the months, it should, logically, include September. There is, however, no sudden rise in the quality of milk after the 30th day of September, and, as a matter of fact, mixed milk from a herd of average cows, well cared for and properly fed, nearly always contains from $12\frac{1}{2}$ to 13 per cent of milk solids, and from $3\frac{1}{2}$ to 3.7 per cent of fat; so that reducing the standard below this for half the year is merely inviting the producer to keep cows which give a large quantity of poor milk, like the Holstein cows, in which case he finds it hard work to get milk of a proper quality when the standard rises in October. Or else if he keeps cows which give milk of better quality than called for by the low standard, it permits him, or the middleman, to partly skim or slightly water the milk for that half of the year during which the standard is reduced. I think the standard should be the same for the whole year, namely, 13 per cent or certainly $12\frac{1}{2}$ per cent of milk solids, not only for the foregoing reason but also as a means of better enforcing

the law. If a complaint is now made against any one selling milk containing only 11½ to 11.7 per cent of milk solids, while the standard only calls for 12 per cent, the amount that such milk falls below the standard seems but very little when stated in court, although it almost certainly shows that the milk has been either a little skimmed or slightly watered, or else is from cows of such inferior quality as to make them unfit to keep for producing milk for the market. In either case more sympathy is aroused for the dealer than he is rightly entitled to, and it is made to appear that the Inspector is making a complaint for a very slight infraction of the law. As a matter of fact, even when the standard calls for 13 per cent of solids, a man selling milk containing only one or two-tenths of a per cent below 12 per cent is almost never prosecuted, unless there is some other evidence besides the analysis to show that he has been tampering with the milk; and if he is found selling milk poorer than this he is just as liable to have a complaint made against him when the standard is 12 per cent, as when it is 13 per cent, so that he really gains nothing by the lower standard, and as before stated there is a constant temptation to slightly adulterate milk during half the year.

The whole trouble which milkmen and contractors find in getting dairies which give milk fully up to or a little above the standard, and I am quite well aware that they often have considerable trouble in getting milk which contains quite 13 per cent of milk solids, lies in the fact that milk is bought by them by measure instead of being paid for according to the amount of fat it contains. The whole aim of the dairyman is to raise as large a quantity of milk as possible, regardless of its quality, so long as he can sell it, so that the quality of milk raised for the market is greatly inferior to that raised for the manufacture of butter. The creameries all pay for milk according to the amount of fat it contains, thus one quart of milk when raised for butter will, if it contains 6 per cent of fat, bring the farmer as much as two quarts containing only 3 per cent, and give him only half the quantity to haul, while in selling it for the market he gets double the price for the two quarts of poor milk which he would get for the one quart of rich milk. He, of course, therefore, tries to raise the two quarts, and selects cows which give a great quantity of milk, instead of those which give it of rich quality. It would be a simple matter for the contractors or milkmen to determine the amount of fat in the milk of any dairy by means of the Babcock milk tester and to pay for it according to the amount it was found to contain, and it is a constant surprise to me that such a reform in the business has not been instituted before this.

Many milk routes have been consolidated this last year, and the present tendency certainly is for the large dealers to crowd out the

smaller ones. It is likely that, on the whole, this is no disadvantage to the public, and if the same process could be applied to stores which sell milk, so that only ten or a dozen would keep it for sale, instead of some three hundred as at present, it would be of the greatest possible advantage to the consumers. Such milk stores would sell so large an amount that they could afford to keep and sell it under the best sanitary conditions, while many of the stores at present violate most of the sanitary rules in their method of handling milk, and many by selling it for less than it cost, use it merely as an advertisement to draw trade, and, of course, buy as cheap milk as they can get, and take no care in selling it so long as it is near enough to the legal standard to save them from prosecution. In warm weather, when such milk reaches the customer it is often on the verge of souring, and contains countless swarms of bacteria of all kinds. Some which I tested last summer contained as high as twenty millions to the cubic centimeter — about half a teaspoonful — while milk just as it comes from the cow should contain none. A license fee of fifty to one hundred dollars a year, instead of fifty cents as at present, would do more to secure good milk to the public than any other thing which could be done; most of the stores would promptly stop selling it, and many of the poorer class of milkmen, who have no proper facilities for handling it, would go out of the business; while the poorer class of customers who now depend on the corner grocery for their milk, could get it from the large milk store in much better and more wholesome condition than at present. This remedy is so simple that it seems strange it has not already been adopted, and incidentally it would have the advantage of making the Department of Milk Inspection considerably more than self-supporting.

Much the same thing can be said about the sale of vinegar and cider vinegar, as I said in my report for last year. A distinction is made in the Public Statutes between these two kinds of vinegar. Both are required to have an acidity of four and one-half per cent. of absolute acetic acid, but in the case of cider vinegar, two per cent of cider vinegar solids are also required, while vinegar is not required to have any solids. Most of the vinegar sold as cider vinegar is made to conform to this standard, but probably very little is really pure cider vinegar. The wholesale price of the two kinds of vinegar is so nearly the same that the retail dealer has but little object in substituting one for the other, and when there is any fraud in the sale I think it is generally the fault of the wholesale dealer who supplies the retailer, as the latter has nothing to gain by substituting one for the other, and cannot tell by the appearance whether a given barrel contains vinegar or cider vinegar, he is probably innocent of intentional deceit. A law forbidding the coloring of vinegar to imitate cider vinegar would do much to prevent substitution.

I have not run across any samples of oleomargarine among the samples of butter analyzed, and am inclined to think that but little of this article is kept for sale. No one has taken out an oleomargarine license for the last two years.

The annual appropriation for this department was fifteen hundred dollars, the same as last year. The manner in which this money has been spent, and the amount of work done is shown in the following table: —

Appropriation		$1,500 00
Salaries	$1,320 00	
Paid for milk samples	60 52	
" " car tickets	35 00	
" " stationery, etc.	14 35	
" " general running expenses	70 13	
		1,500 00

Number of annual milk licenses issued	173
" " store " " "	129
Amount collected from sale of licenses	$151 00
Number of samples collected and analyzed	4,459
" " milk samples " " "	4,225
" " vinegar " " " "	172
" " butter " " " "	62
" " milk " below the standard	367
" " vinegar " " " "	19
" " butter " not genuine butter	0
" " warnings sent for sale of poor milk	217
" " " " " " vinegar	12
" " complaints made	13
" " convictions	10
Amount of fines imposed	$510 00

Respectfully submitted,

FRANK A. DUNBAR, M. D.,
Inspector of Milk.

REPORT OF INSPECTOR OF ANIMALS

To the Honorable, the City Council: —

Gentlemen: In compliance with the Statute Law of June, 1899, and the City Ordinance, I have the honor to present my annual report of Inspector of Animals and City Veterinary, ending November 30, 1899.

The law of June, 1899, has changed the title of Inspector of Animals and Provisions to that of Inspector of Animals, the inspection of provisions coming under the direction of the Board of Health, of this City.

Appropriation		$800 00
Salary	$700 00	
Medicines, etc.	93 61	
Balance on hand	6 39	
		$800 00

The animals kept for the production of milk, have been inspected this year, and are found to be in a healthy condition, so far as can be determined by a physical examination.

The number of cases of glander and farcy among the horses has increased.

Total number of horses examined	46
Quarantined	33
Killed	31
Released	2

Under this same law of June, 1899 all suspicious cases taken to the abattoirs, by the owners, are reported to the State Board of Cattle Commissioners, who in turn report them to me.

By this means we are able to have all such stables disinfected, thus allaying the further spreading of these diseases.

There have been no cases of rabies reported.

The number of horses examined for soundness with the idea of purchasing for the various departments of the City, fourteen (14).

For the care of sick and lame horses I have made 558 visits.

The horses of the City are in a healthy condition and have been free from any epidemic diseases during the year.

Thanking His Honor, the Mayor, and Members of the City Council, I am,

Very respectfully yours,

CHARLES E. HADCOCK, M. D. V.,
Inspector of Animals.

REPORT OF THE TRUSTEES OF THE BRIDGE CHARITABLE FUND

To the Honorable, the City Council: —

The twenty-third annual report of the Trustees of the Bridge Charitable Fund is herewith submitted:

The amount on deposit in the Cambridgeport Savings Bank to the credit of this fund to July 18, 1898, was	$3,648 25
Interest (added semi-annually) to July 18, 1899	147 38
Amount of the fund at this latter date	$3,795 63

This Board has no duties to perform in connection with this trust, other than to see that the conditions under which the original gift of Levi Bridge was made to the City are fully observed and performed. In furtherance of this duty the Trustees would urge that the amount due and payable to the Board of Overseers of the Poor, from the fund, according to the terms of the bequest, be withdrawn from the bank and paid over to the latter Board, which already has the amount of a previous dividend on deposit at the same bank.

It is estimated that $1,100.00 and upwards should be so transferred.

The history of this fund has been stated in former reports, to one of which, that of the year 1878, reference may be made by those who desire information upon the subject. The history of the circumstances attending the original gift, with the report of the action of the City Council thereon, are recited in the City Document for that year, page 192.

The story is an interesting one, as showing the persistence with which the aged donor strove to accumulate the sum which became the nucleus of this fund, and the far-reaching charity which looked forward through the centuries, to the welfare of the unfortunate poor of Cambridge.

EDGAR R. CHAMPLIN,
WALTER C. WARDWELL,
WILLIAM F. BROOKS,
Trustees of the Bridge Charitable Fund.

REPORT OF BOARD OF HEALTH

To the Honorable, the City Council: —

In compliance with the Public Statutes creating Boards of Health and defining their duties, we have the honor to make our annual report for the year ending December 31, 1899.

We respectfully call the attention of your honorable body to the following list of complaints investigated, and nuisances abated, during the year: —

Full, overflowing, and offensive privy-vaults	24
Offensive and defective water-closets	183
Full and defective cesspools and catch-basins	11
No traps to sinks	25
Leaky and defective traps	46
Defective drainage, open and broken drains	65
Plumbing tests made	139
Filthy yards	401
Filthy stables and cow sheds	35
Manure in yards and lots	47
Wet and damp cellars	37
Stagnant water on premises	5
Dead animals on premises	27
Dead hens on premises	11
Filthy buildings	18
Filthy cellars	183
New water-closets put in	91
Dirty bakeries	1
Miscellaneous	10
Total	1,359
Number of inspections made	4,571
Number of subsequent inspections	6,617
Total	11,188
Number of notices served	99
Slop closets abolished	13
Offal receptacles cleaned	59
Vacant lots cleaned	37
Defective plumbing in whole house remedied	5
Privy-vaults abolished	35
Cesspools abolished	27
Number of houses placarded	505
Premises disinfected	1,065
Number of stables from which pigs were removed	2
Number of cellars from which hens were removed	13

MEDICAL INSPECTION OF SCHOOLS.

The diseases discovered in the schools during 1899, and the number of cases of each disease, were as follows: —

Chicken-pox	18
Diphtheria	4
Measles	24
Mumps	18
Pediculosis	57
Scarlet fever	5
Whooping-cough	11
Diseases of ear	11
Diseases of eye	38
Diseases of skin	36
All other diseases	150
Total	372

The number of cases reported shows an increase of one hundred and forty seven over the number reported in 1898.

The cases of disease reported from different schools varied as follows: From seven schools one case was reported in each; from four schools two cases in each; from three schools three cases in each; from three schools four cases in each; from one school five cases; from one school six cases; from two schools nine cases in each; from one school ten cases; from one school thirteen cases; from one school fourteen cases; from three schools fifteen cases in each; from one school sixteen cases; from two schools eighteen cases in each; from two schools twenty-one cases in each; from one school thirty-one cases; from one school thirty-four cases; from one school sixty-six cases.

Reports were received from thirty-five schools.

HOSPITAL.

During the past year, the City has suffered severely from the prevalence of certain infectious diseases, and in particular, from diphtheria. This has placed upon the Board of Health so deep a responsibility, and has caused the City such unexpected expenditure, that a review of the growth of the disease and of the means taken to arrest its progress seems proper.

From December 1, 1898, to August 1, 1899, the number of cases of infectious disease was practically normal as compared with past years. Soon after the beginning of August, diphtheria began to become unusually prevalent and the number of cases each week increased steadily until the middle of November. It then decreased a little and since that time it has not materially changed. The following figures show the prevalence of diphtheria and scarlet fever from August 1st to December 31st, as compared with the corresponding months of the previous three years.

August 1st to December 31st.

	1896.	1897.	1898.	1899.
Diphtheria	132	125	81	403
Scarlet Fever	129	73	38	86
Total	261	198	119	489

It became apparent to the Board of Health at an early date that active measures must be taken to protect the public health. The position of Bacteriologist to the Board was at that time vacant, and Dr. Eugene A. Darling was appointed to that office. A number of stations, where cultures of suspected cases of diphtheria could be taken, were established for the convenience of physicians, and a laboratory was instituted in the City Hall. All physicians were notified that their co-operation was expected, and that in return the Board would give them every assistance by the prompt examination of cultures deposited at the designated stations.

The thickly populated districts of East Cambridge and the lower portion of Cambridgeport suffered the most severely. In the opinion of the Board, isolation of infected persons was absolutely necessary for the protection of the public health.

The infectious wards of the Cambridge Hospital are built to hold 16 patients; about 25 patients were accommodated. The Cambridge Hospital had then reached its utmost limit, and the Chairman had to refuse many applications for its beds.

Finding further hospital accommodations necessary, and being able to make no satisfactory lease of a proper building, the dwelling house numbered 59 Reservoir Street was taken by right of eminent domain under the authority vested in the Boards of Health by Public Statutes, Chap. 80, Sect. 43.

The warrant to seize this building was issued November 2, 1899. Certain repairs were found necessary by the City Inspector of Plumbing, and various alterations were ordered to make the house more suitable for a hospital. The cost of establishing this temporary hospital was as follows:

Alterations and repairs,	$1,220 00
Furnishing,	882 23
Running expenses per week,	265 60

The building was ready for patients on December 2, 1899.

The use which has been made of the Cambridge Hospital and the temporary hospital may be of practical interest. The following figures are therefore appended:

Diphtheria.

	Cambridge Hospital.	Temporary Hospital.	Outside.	Total.
Cases 1899,	93	28	381	502

SCARLET FEVER.

	Cambridge Hospital.	Outside.	Total.
Cases 1899,	19	139	158

WELLINGTON BROOK.

In the early part of September the following petition was received, viz. :

To the Honorable Board of Health of the City of Cambridge : —

The undersigned, taxpayers in said City of Cambridge respectfully represent :

That the channel of Wellington Brook in said City of Cambridge, between the Belmont line and Little River, has become obstructed to such a degree as to cause the land on both sides of said brook to become wet, rotten, spongy and covered with stagnant water so as to be offensive to persons residing in the vicinity and injurious to health.

Your petitioners do not know and cannot therefore state the names of all the owners above referred to.

Your petitioners being the owners of land lying near to the land adjoining said brook and above referred to, or residing near the same, are injuriously affected by the nuisance above described.

Your petitioners believe that said nuisance can be abated at comparatively small expense by clearing out the channel of said brook.

WHEREFORE, they pray that your Honorable Board will cause said nuisance to be abated and take such measures as may be necessary for that purpose.

(Signed),

S. TOWER,
H. W. TOWER,
JOHN F. CROCKER,
GEO. P. OSBORNE.

The Board then requested the City Engineer to report a plan for the proper draining of Wellington Brook and an estimate of the cost, and on November 1st, he submitted the following report : —

"I am in receipt of a communication from your Board dated October 20, 1899, stating that by a vote of the Board, the City Engineer was 'requested to report a plan for the proper drainage of Wellington Brook and an estimate of the cost.'

For several years the owners of property, especially meadow land, in the vicinity of Wellington Brook, both in Cambridge and in Belmont, have been anxious that the conditions in these meadows, which cover a considerable area, should be improved as regards their drainage. It has been claimed by the parties interested that whereas in former years much of the low lands and meadows were sources of profit from the crops of grass or vegetables produced, now the conditions are such that little or nothing

can be raised on the land, stagnant water covering much of it during the entire season. It is also claimed that malaria and malarial fevers are induced by the conditions as they now exist.

The Board of Health of the Town of Belmont states that they have taken steps to have the nuisance abated within the limits of that town by requiring the several owners abutting on the brook to clean out and deepen the same, but that owing to the flat condition of the land but little benefit from this work has yet been derived, nor can be, until this improvement is carried down the brook to its outlet, so that a proper and adequate means of discharge of the storm water collected by the brook may be provided.

As I understand, it is in furtherance of this desire, expressed by petition and conference, that the above vote was passed.

A personal visit and examination of the grounds reveals a somewhat peculiar condition of affairs. Wellington Brook in Belmont is a fair sized and well defined brook or water course, draining quite a large sized territory in that town. After passing under Wellington Street and the Fitchburg and Central Massachusetts railroads within the limits of the City of Cambridge, however, the brook dwindles in size and finally disappears from view altogether, the water making its way by no well defined course or channel to the Little River, its outlet. Numerous obstructions in its course also tend to dam the water and retard the flow. The water in the ponds and in many of the brooks and ditches seemed perfectly stagnant, covered with a thick scum of green vegetable growth. The meadow land was nearly all of it covered with water producing nothing but coarse water grass and bulrushes or 'cat o' nine tails.' Bad as these conditions undoubtedly are, they seem not to be the result of anything for which the City of Cambridge is responsible. The trouble is entirely on private land with the exception of at one point where the old Little Pond Conduit of the Cambridge Water Works crosses the location of the brook. Any obstruction here can easily be remedied by a few hours work.

Whether the main trouble, insufficient channel or water way, is the result of natural causes — the gradual filling up of the old brook channel — or whether the channel was altered and relocated improperly in former years, I am unable to say.

It seems to be clear, however, that the parties owning land on which the trouble exists are the ones particularly responsible and who will benefit most by any improvement which may be carried out.

I submit with this a plan showing the territory in question, with the water courses as they now exist, and also two suggested routes for new channels.

One of the essential things in an improvement of this kind, is to obtain a good head of fall for the water. I have had a careful series of levels to be taken from Alewife Brook to the Wellington Street Bridge, to determine what the general elevation of the water was at these points. The water at Alewife Brook is affected somewhat by the tide, but I find that the average elevation of Alewife Brook at its junction with Little River, at point marked 'H,' was 13.70 feet above the city base. The surface of the water in brook, at point marked 'F,' was 15.40 feet, at the culvert

under the Fitchburg R.R., marked 'D,' the water was 16.20 feet, and at Wellington Street Bridge, marked 'C,' the water was 16.60 feet, so that there was an average total fall of 2.90 feet from Wellington Street Bridge to Alewife Brook. With a proper channel opened for the flow of water, this level or head can at most times be considerably reduced and a very great improvement made in the condition of meadow land adjoining, as regards their healthfulness and also their productiveness. I say 'at most times' for the reason that this land is below the level of extreme high tides, and when they occur, the land will be subject to flooding. Also, in time of heavy storm it may be expected that the water will rise above the level of the land. These occasions, however, should not be of frequent occurrence, nor of long duration. The general and usual condition of the lands can, I believe, be greatly improved by the work here recommended which is in brief as follows: —

The bed of the present brook is to be cleaned out and, if necessary, deepened from the Wellington Street Bridge, point 'C' to its crossing over the Little Pond Conduit at 'E.' From here two routes are suggested, one to follow the old brook to Perch Pond, thence from Perch Pond by a new ditch on route marked 'A' through land of Warren Heustis to Little River. The other route to start from point 'E' following the old ditch by 'F' to 'G,' thence by a new ditch by route marked 'B' to Little River. By either route any obstructions now existing in Little River should be removed so as to get the water there to its lowest possible level.

The distance by the first route, marked 'A,' is about two thousand two hundred and fifty feet, and the estimated approximate cost of the work is eight hundred dollars.

The distance by the second route, marked 'B,' is about two thousand nine hundred feet, and the estimated approximate cost of the work is eleven hundred dollars.

Of the two routes mentioned, which one should be selected will depend largely upon the attitude of the owners and their willingness to co-operate in promoting the work.

That by route 'A' is the shortest, most direct to the river, and least expensive. While route 'B' is longer and more expensive, it yet might prove the more desirable to the land owners, as it would more effectually drain portions of the meadows not reached by the channel on route 'A.'

Respectfully submitted,

L. M. HASTINGS,
City Engineer."

NEW REGULATIONS.

During the year the following Regulations have been adopted:

The Board of Health hereby adjudges that spitting upon the floor, platform, or any other part of a public conveyance; upon the floor, steps or stairs of any public building, hall, church, railway station, or shop; upon the sidewalk of any street, court, or passageway; or upon the pathway of any park, square, or common is a nuisance, source of filth and cause of sickness, and prohibits spitting in any and all such places.

Adopted April 12, 1899.

Every building used as a dwelling, tenement or lodging-house, situated on a public or private street, court, or passageway in which there is a public sewer opposite to such building, or connected with a public or private sewer, shall be provided with one water-closet, and with one additional water-closet for every ten persons, or portion thereof, dwelling therein, beyond the number of twenty; and said water-closet or closets shall be kept at all times supplied with water by a proper system of pipes running thereto, and shall be constantly maintained in proper working order.

Adopted June 14, 1899.

Any person being infected with or recovering from diphtheria or scarlet fever who is in a building used as a dwelling, tenement or lodging-house, shall not leave such building without a permit from the Board of Health.

Adopted January 10, 1900.

E. EDWIN SPENCER,
CHARLES HARRIS,
WM. RODMAN PEABODY,
Board of Health of City of Cambridge.

OFFICE OF BOARD OF HEALTH,
CITY HALL, December 31, 1899.

To the Honorable, the City Council: —

This Board herewith respectfully submits its annual financial statement, it being for the year ending November 30, 1899: —

Amount appropriated for Health Department		$19,850 00

AMOUNT EXPENDED.

Advertising	$3 44	
Ambulance (cost of running)	11 00	
Bacteriological examinations	851 30	
" laboratory supplies	232 14	
Burial of animals	74 40	
Candles	232 00	
Car tickets	500 00	
Card index	8 00	
Carriage hire	47 50	
Chemicals	154 20	
Directories	8 00	
Document file	15 95	
Dump signs	1 30	
Expressage	1 50	
Formaldehyde lamps and maintenance	33 14	
Frames	8 75	
Harness and wagon repairs	53 60	
Hospital, Cambridge (care of patients)	5,969 33	
" Temporary (supplies)	85 52	
Inspection of ice	25 75	
Keep of horse, shoeing and storage	389 65	
Legal services	44 00	
Matches	1 77	
Milk (small-pox patients, 1897)	1 73	
Public urinals (tools, disinfectants and maintenance)	77 07	
Printing and postage	203 17	
Service of notices	22 38	
Services of medical inspector and physician to Board	3,000 00	
" " clerk	1,200 00	
" " executive agent	800 00	
" " sanitary inspectors	2,648 35	
" " driver	750 00	
" " plumber	932 61	
School inspection (services of physicians)	1,305 90	
Stationery	37 31	
Tacks, twine, etc.	1 56	
Telephones	250 00	
Tunnel	40	
Vaccine points	1 00	
Total expenditures		19,754 04
Balance of appropriation unexpended		$95 96

By direction of the Board of Health,

JAMES B. SOPER,
Clerk.

CAMBRIDGE, January 1, 1900.

To the Board of Health:

GENTLEMEN: — I beg to submit the following report of work done in the Bacteriological Laboratory during the months of November and December, 1899.

Throat Cultures. — During the two months 505 cultures were examined. They may be classifield as follows:

	November.	December.	Total.
New cases, positive	43	69	112
negative	47	68	115
no growth	3	4	7
Total new cases	93	141	234
Re-examinations	93	178	271
Total examinations	186	319	505
Cultures for diagnosis	57	118	175
Cultures for release	129	201	330
	186	319	505

Cultures for Diagnosis. — The 175 cultures for diagnosis were from 163 cases. In seven instances two or more cultures were made from the same throat. In eighty-eight cases the clinical diagnosis was recorded by the attending physician, while in the remaining seventy-five the clinical diagnosis was doubtful or not recorded. The following table gives in brief a comparison of the clinical diagnosis and culture results.

	Clinical Diagnosis Diphtheria.	Clinical Diagnosis not Diphtheria.	Clinical Diagnosis Doubtful or not recorded.	Total.
Culture positive	35	6	25	66
Culture negative	8	34	46	88
1st culture no growth, 2d positive	1	.....	.....	1
1st culture no growth, 2d negative	2	.....	.....	2
1st culture no growth, no 2d culture	1	.....	1	2
1st culture positive, 2d and 3d negative	.....	1	.....	1
1st culture negative, 2d positive	.....	.....	3	3
	47	41	75	163

Omitting two cases — one in which the first culture was called positive and the second and third negative, and in which there was probably an error in the first report, and another in which the only culture taken showed no growth — it will be seen that of the forty-six cases diagnosticated as diphtheria, ten (or about 21 per cent) gave negative cultures, while of forty cases which did not look like diphtheria when the cultures were taken, six (or 15 per cent) showed the bacillus of diphtheria. Of the total eighty-six cases the clinical diagnosis was not verified by culture in sixteen (or about 18.5 per cent). These figures only serve to emphasize the acknowledged facts that the clinical appearances of acute throat infections are often deceptive, especially in the early stages, and that cultures should be taken from all such cases. In this way alone can many mild cases of diphtheria be detected and proper isolation established. On the other hand the habitual taking of cultures will enable the physicans to detect occasional cases of streptococcus or staphylococcus infections which simulate true diphtheria but are rarely of serious consequence.

It is to be regretted that the physicians of Cambridge do not avail themselves more fully of the opportunity of taking cultures. During November and December 176 cases of diphtheria and six cases of membranous croup were reported to the Board of Health. Cultures for diagnosis were made in only sixty-five of these cases. Many of the remaining cases were reported as recovered, and cultures were found negative within a week from the beginning of the attack and it is probable that a certain proportion of these cases were not true diphtheria at all.

Cultures for Release. — The 330 cultures for release were divided among 126 cases. Of these only thirty-nine had had preceding cultures taken for diagnosis and of the remaining eighty-seven cases the first release culture was negative in thirty-two. Omitting seventeen cases which were still isolated on December 31, after one or more positive cultures, the average period of detention after the case was reported recovered by the attending physician (counting from the date of the first culture for release) was about nine days. The longest period was thirty-nine days, and the largest number of cultures taken from a single case was nine.

Widal Tests for Typhoid. — The blood of thirty-one cases of suspected typhoid was examined for the Widal reaction with the following results: —

	November.	December.	Total.
Positive	5	4	9
Negative	11	11	22
	16	15	31

The clinical histories of these cases, as recorded on the accompanying cards, were too fragmentary to yield any results of value on analysis.

Sputum Examinations. — Samples of sputum from thirty-four cases of suspected pulmonary tuberculosis were examined, — one case being tested twice, — with the following results : —

	November.	December.	Total.
Bac. of tuberculosis present	10	7	17
" " " absent	11	7	18
	21	14	35

Distributing Stations. — For the convenience of the physicians, the following drug stores located in various parts of the city, have been selected as stations for the distribution and collection of the several outfits for throat cultures, Widal tests and sputum examinations : —

Billings & Stover	Harvard Square.
George M. Olive	1863 Massachusetts Ave., North Cambridge.
Carrie E. Phillips	81 Concord Avenue.
Harry L. Coe	Mt. Auburn, corner Belmont Street.
W. B. Hunt & Co.	605 Massachusetts Avenue, Cambridgeport.
W. H. Frazier	169 Harvard Street.
A. C. Saunders	441 Cambridge Street, East Cambridge.
A. Cunningham	Inman Square.

These stations are kept supplied with the various outfits. The outfits after use are returned to the stations and are collected daily between five and six o'clock, by an agent of the Board. The delivery of reports has also been facilitated by telephoning the results of examinations as soon as completed.

Respectfully submitted,

EUGENE A. DARLING, M. D.

VITAL STATISTICS.

DEATH RATE, PER 1,000 LIVING, FROM ALL CAUSES.
ESTIMATED POPULATION, 92,520.

1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
17.05	19.24	19.44	20.89	19.56	18.40	18.73	17.63	17.18	16.63

The mean annual death rate for the ten years, 1890 to 1899 inclusive, was 18.47.

In calculating the death rates given above, the deaths of non-residents occurring in the City were excluded, and the deaths of residents, wherever they occurred, were included.

The death rate for the year is the lowest since the Board of Health was created in 1878.

SCARLET FEVER.

CASES REPORTED.

Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
.....1	3	2	0	6	1	2	0	0	2	5	4	1	26
.....2	0	4	7	3	10	5	0	1	2	3	4	7	46
.....3	0	0	3	0	1	3	0	0	3	3	1	3	17
.....4	0	4	7	4	1	0	0	1	2	9	4	7	39
.....5	1	0	2	2	0	2	1	0	10	3	7	2	30
Total.....	4	10	19	15	13	12	1	2	19	23	20	20	158

The reported cases of Scarlet Fever show an increase of 36 over those reported in 1898.

Ward 1 shows no change.
Ward 2 shows a decrease of 6 cases.
Ward 3 shows an increase of 13 cases.
Ward 4 shows an increase of 16 cases.
Ward 5 shows an increase of 13 cases.

Cases Reported Weekly.

	Cases.		Cases.
Week ending January 7	2	Week ending April 1	2
" " " 14	2	" " " 8	3
" " " 21	0	" " " 15	8
" " " 28	0	" " " 22	3
Week ending February 4	1	" " " 29	1
" " " 11	1	Week ending May 6	0
" " " 18	4	" " " 13	1
" " " 25	2	" " " 20	2
Week ending March 4	7	" " " 27	4
" " " 11	2	Week ending June 3	14
" " " 18	4	" " " 10	2
" " " 25	6	" " " 17	1

Cases Reported Weekly — Concluded.

	Cases.		Cases.
Week ending June 24	1	Week ending Septemb'r 30	2
Week ending July 1	0	Week ending October 7	2
" " " 8	0	" " " 14	3
" " " 15	0	" " " 21	7
" " " 22	1	" " " 28	8
" " " 29	0	Week ending November 4	6
Week ending August 5	0	" " " 11	5
" " " 12	1	" " " 18	8
" " " 19	0	" " " 25	3
" " " 26	0	Week ending December 2	3
Week ending September 2	3	" " " 9	3
" " " 9	1	" " " 16	1
" " " 16	10	" " " 23	9
" " " 23	4	" " " 30	6

Age and Sex Distribution of 158 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	2	0	2
1– 2 Years	2	4	6
2– 3 "	6	6	12
3– 4 "	12	9	21
4– 5 "	8	10	18
5-10 "	26	37	63
10–15 "	11	12	23
15–20 "	2	2	4
20–30 "	1	3	4
30–40 "	0	3	3
40–50 "	1	0	1
50–60 "	1	0	1
Total	72	86	158

Death Rate per 1000 Living.

1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
0.14	0.13	0.22	0.87	1.27	0.20	0.07	0.11	0.06	0.08

Morbidity, or Sick Rate, per 1000 Living.

2.69	4.90	5.01	8.84	11.37	3.59	2.35	2.66	1.30	1.70

Fatality, or Case Death Rate, Percentage.

5.29	2.82	4.54	9.85	11.20	5.80	3.03	4.32	4.91	5.06

For the ten years recorded above, the mean annual death rate was 0.31; the mean annual morbidity, 4.44; the mean annual fatality, 5.68.

DIPHTHERIA.

CASES REPORTED.

Ward.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1.....	0	1	2	0	2	0	1	2	6	6	7	15	42
2.....	10	4	3	1	3	5	6	3	14	28	16	39	132
3.....	0	2	0	0	6	18	9	18	48	68	24	36	229
4.....	1	0	4	3	1	1	1	0	8	9	13	25	66
5.....	0	0	0	4	8	4	2	2	5	3	3	2	33
Total.....	11	7	9	8	20	28	19	25	81	114	63	117	502

The reported cases of diphtheria show an increase of three hundred and fifty over those reported in 1898.

Ward 1 shows an increase of 17 cases.
Ward 2 shows an increase of 63 cases.
Ward 3 shows an increase of 224 cases.
Ward 4 shows an increase of 31 cases.
Ward 5 shows an increase of 15 cases.

Cases Reported Weekly.

	Cases.		Cases.
Week ending January 7	1	Week ending July 8	5
" " " 14	3	" " " 15	2
" " " 21	3	" " " 22	4
" " " 28	3	" " " 29	7
Week ending February 4	2	Week ending August 5	4
" " " 11	1	" " " 12	0
" " " 18	1	" " " 19	12
" " " 25	3	" " " 26	3
Week ending March 4	2	Week ending September 2	10
" " " 11	2	" " " 9	18
" " " 18	3	" " " 16	13
" " " 25	2	" " " 23	24
Week ending April 1	1	" " " 30	21
" " " 8	3	Week ending October 7	31
" " " 15	2	" " " 14	27
" " " 22	2	" " " 21	20
" " " 29	1	" " " 28	24
Week ending May 6	1	Week ending November 4	19
" " " 13	5	" " " 11	11
" " " 20	7	" " " 18	19
" " " 27	5	" " " 25	16
Week ending June 3	9	Week ending December 2	15
" " " 10	6	" " " 9	31
" " " 17	6	" " " 16	27
" " " 24	5	" " " 23	25
Week ending July 1	5	" " " 30	28

Age and Sex Distribution of 495 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	4	1	5
1– 2 Years	15	19	34
2– 3 "	16	30	46
3– 4 "	27	26	53
4– 5 "	18	30	48
5–10 "	96	91	187
10–15 "	24	47	71
15–20 "	7	15	22
20–30 "	8	7	15
30–40 "	4	10	14
Total	219	276	495

Death Rate per 1000 Living.

1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
0.52	0.22	0.75	0.53	0.76	1.29	0.73	0.58	0.32	0.59

Morbidity, or Sick Rate, per 1000 Living

2.24	1.59	1.74	1.33	2.24	7.27	5.40	3.69	1.69	5.42

Fatality, or Case Death Rate, Percentage.

20.3	13.0	37.8	36.8	32.5	17.8	13.6	15.8	19.0	10.9

For the ten years recorded above the mean annual death rate was 0.62; the mean annual morbidity, 3.26; the mean annual fatality, 21.7.

TYPHOID FEVER.

CASES REPORTED.

Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1.....	0	0	1	1	0	0	1	2	1	1	2	1	10
2.....	1	0	1	0	3	1	1	5	4	6	2	4	28
3	1	0	0	1	1	1	0	5	3	3	1	0	16
4.....	0	0	1	0	1	3	0	5	3	7	7	2	29
5.....	1	0	1	1	0	0	0	2	7	1	2	2	17
Total.....	3	0	4	3	5	5	2	19	18	18	14	9	100

The reported cases of Typhoid Fever show an increase of 4 over those reported in 1898.

Ward 1 shows a decrease of 19 cases.
Ward 2 shows an increase of 3 cases.
Ward 3 shows an increase of 11 cases.
Ward 4 shows an increase of 9 cases.
Ward 5 shows no change.

The distribution of ninety-eight cases according to the months in which the disease was probably contracted is as follows: —

December, 1898	3	July, 1899	13
February, 1899	3	August "	19
March "	5	September "	17
April "	3	October "	17
May "	5	November "	10
June "	3		

Age and Sex Distribution of Ninety-eight Cases.

Age.	Males.	Females.	Persons.
2– 3 Years	1	0	1
3– 4 "	0	1	1
4– 5 "	3	0	3
5–10 "	2	2	4
10–15 "	10	5	15
15–20 "	6	9	15
20–30 "	18	14	32
30–40 "	14	6	20
40–50 "	3	1	4
50–60 "	1	2	3
Total	58	40	98

Death Rate per 1000 Living.

1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
0.24	0.22	0.20	0.20	0.29	0.14	0.35	0.12	0.15	0.21

Morbidity, or Sick Rate, per 1000 Living.

1.08	0.97	1.07	1.20	1.50	1.31	3.03	1.20	1.06	1.08

Fatality, or Case Death Rate, Percentage.

25.	22.8	18.7	17.3	17.5	11.2	11.7	10.4	14.5	20.

For the ten years recorded above, the mean annual death rate was 0.21; the mean annual morbidity, 1.35; the mean annual fatality, 16.9.

MEASLES.

CASES REPORTED.

Ward	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1.....	1	6	8	15	21	20	2	0	0	0	1	0	74
2.....	2	4	20	18	47	69	17	3	1	13	3	3	200
3.....	0	0	0	2	3	46	4	0	0	1	0	0	56
4.....	2	6	0	15	23	30	5	0	0	0	1	2	84
5.....	0	0	12	14	17	11	3	2	0	0	0	0	59
Total.....	5	16	40	64	111	176	31	5	1	14	5	5	473

The reported cases of Measles show an increase of 420 over those reported in 1898.

Ward 1 shows an increase of 57 cases.
Ward 2 shows an increase of 174 cases.
Ward 3 shows an increase of 54 cases.
Ward 4 shows an increase of 79 cases.
Ward 5 shows an increase of 56 cases.

Cases Reported Weekly.

	Cases.		Cases
Week ending January 7	1	Week ending July 8	6
" " " 14	0	" " " 15	8
" " " 21	0	" " " 22	8
" " " 28	3	" " " 29	9
Week ending February 4	1	Week ending August 5	3
" " " 11	7	" " " 12	2
" " " 18	1	" " " 19	0
" " " 25	6	" " " 26	0
Week ending March 4	5	Week ending September 2	1
" " " 11	5	" " " 9	0
" " " 18	3	" " " 16	0
" " " 25	4	" " " 23	0
Week ending April 1	27	" " " 30	1
" " " 8	6	Week ending October 7	5
" " " 15	29	" " " 14	5
" " " 22	10	" " " 21	3
" " " 29	17	" " " 28	1
Week ending May 6	6	Week ending November 4	0
" " " 13	22	" " " 11	2
" " " 20	19	" " " 18	0
" " " 27	49	" " " 25	1
Week ending June 3	40	Week ending December 2	2
" " " 10	59	" " " 9	1
" " " 17	31	" " " 16	2
" " " 24	44	" " " 23	1
Week ending July 1	16	" " " 30	1

Age and Sex Distribution of 445 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	10	10	20
1– 2 Years	13	14	27
2– 3 "	23	22	45
3– 4 "	21	20	41
4– 5 "	27	22	49
5–10 "	90	86	176
10–15 "	6	7	13
15–20 "	14	4	18
20–30 "	20	22	42
30–40 "	6	6	12
60–70 "	1	0	1
70–80 "	0	1	1
Total	231	214	445

Death Rate, per 1000 Living.

1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
0.01	0.11	2.02	0.14	.....	0.03	0.06	0.03	0.01	0.08

Morbidity, or Sick Rate, per 1000 Living.

.....	.....	.....	.....	.....	3.05	2.70	4.72	0.59	5.11

Fatality, or Case Death Rate, Percentage.

.....	.....	.....	....	....	1.20	2.20	0.73	1.80	1.69

For the ten years recorded above, the mean annual death rate was 0.24. For the five years recorded above, the mean annual morbidity was 3.23; the mean annual fatality was 1.52.

Death Rate per 1000 Living.

Disease.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Cancer	0.67	0.72	0.56	0.60	0.59	0.77	0.64	0.53	0.79	0.55
Diarrhœal diseases	1.82	1.92	2.04	1.64	2.14	1.69	2.35	2.18	1.96	1.30
Phthisis.....	2.49	2.73	2.69	2.76	2.08	2.22	2.30	2.26	2.08	1.79
Whooping-cough ..	0.18	0.16	0.14	0.20	0.43	0.13	0.21	0.19	0.24	0.30
Bronchitis	0.68	0.76	0.87	0.85	0.65	0.50	0.70	0.62	0.51	0.55
Pneumonia	1.52	1.65	1.45	2.06	1.41	1.40	1.90	1.18	1.62	1.76

The mean annual death rate for the ten years recorded above was of cancer, 0.64; of diarrhœal diseases, 1.90; of phthisis, 2.34; of whooping-cough, 0.20; of bronchitis, 0.66; of pneumonia, 1.59.

The death rate of cancer, of diarrhœal diseases, of phthisis and of bronchitis was below the mean of the ten years given above; that of whooping-cough and pneumonia was above the mean.

The death rate of diarrhœal diseases was the same as in the year 1884, and the lowest since the establishment of the Board of Health in 1878.

The death rate of phthisis was the lowest in the same period.

In the Return of Deaths given hereafter M. stands for males, F. for females, P. for all persons.

EDWIN FARNHAM, M. D.

RETURN OF DEATHS. (NON-RESIDENTS OMITTED.)

		All Ages.	0-1	1-2	2-3	3-4	4-5	0-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
All Causes	M...	776	189	48	26	18	7	288	20	16	15	64	67	51	75	75	61	44
	F...	763	178	40	19	10	10	257	30	6	25	65	60	46	57	84	70	63
	P...	1539	367	88	45	28	17	545	50	22	40	129	127	97	132	159	131	107
Bronchitis	M...	25	8	3	....	...	....	11	....	...	...	2	....	1	1	3	3	4
	F...	26	11	....	1	1	1	14	....	....	....	....	1	...	1	3	1	6
	P...	51	19	3	1	1	1	25	....	...	....	2	1	1	2	6	4	10
Pneumonia	M...	89	18	13	7	3	1	42	3	....	3	3	8	6	5	7	9	3
	F...	74	22	3	1	....	....	26	3	....	....	5	5	8	4	12	7	4
	P...	163	40	16	8	3	1	68	6	....	3	8	13	14	9	19	16	7
Cancer	M...	14	....	....	....	....	....	....	....	....	....	....	....	....	3	8	3	....
	F...	37	....	....	....	....	....	....	....	....	....	....	....	4	10	13	6	1
	P...	51	....	....	....	....	....	....	...	....	....	....	3	4	13	21	9	1
Cerebro-spinal Meningitis	M...	4	1	....	....	....	1	2	....	....	1	1	....	....	....	....	.. .	....
	F...	4	1	1	....	....	....	2	....	1	....	1	...	....	....	....	....	...
	P...	8	2	1	....	....	1	4	....	1	1	2	....	....	....	....	....	....
Cholera Infantum	M...	42	32	9	1	....	....	42	....	....	....	....	....	....	....	....	....	....
	F...	20	19	1	....	....	....	20	....	....	....	....	....	....	....	....	....	....
	P...	62	51	10	1	....	....	62	....	....	....	....	....	....	....	....	....	....
Diarrhœa and Cholera Morbus	M...	29	23	3	1	....	....	27	....	....	....	....	....	....	1	....	1	....
	F...	24	16	4	1	....	....	21	1	....	....	....	....	....	....	....	1	1
	P...	53	39	7	2	....	....	48	1	....	....	....	....	....	1	....	2	1
Dysentery	M...	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
	F...	5	1	....	....	....	....	1	....	....	1	....	1	....	....	....	2	....
	P...	6	1	....	....	....	....	1	....	....	1	....	1	....	....	....	3	....
Diphtheria and Croup	M...	21	2	1	4	7	2	16	2	3	....	....	....	....	....	....	....	....
	F...	34	3	5	5	6	3	22	10	1	1	....	....	....	....	....	.. .	....
	P...	55	5	6	9	13	5	38	12	4	1	....	....	....	....	....	....	....
Erysipelas	M...	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
	F...	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
	P...	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....
Fever, Scarlet	M...	3	....	....	1	....	....	1	2	....	....	....	....	....	....	....	....	....
	F...	5	....	....	....	....	....	2	2	1	....	....	....	....	....	....	....	....
	P...	8	....	....	1	....	2	3	4	1	....	....	....	....	....	....	....	....
Fever, Typhoid	M...	17	....	....	....	....	....	....	2	1	....	4	8	2	....	....	....	....
	F...	3	....	1	....	....	....	1	....	....	2	....	....	....	....	....	....	....
	P...	20	....	1	....	....	....	1	2	1	2	4	8	2	....	....	....	....
Influenza	M...	8	2	....	....	...	....	2	....	....	....	....	1	....	1	1	1	2
	F...	4	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	3
	P...	12	2	1	....	....	....	3	....	....	....	....	1	....	1	1	1	5
Measles	M...	3	....	1	....	2	....	3	....	....	....	....	....	....	....	....	....	....
	F...	5	1	1	2	...	....	4	1	....	....	....	....	....	....	....	....	....
	P...	8	1	2	2	2	....	7	1	....	....	....	....	....	....	....	....	....
Phthisis	M...	98	....	3	....	....	....	3	....	5	9	26	24	14	12	2	....	3
	F...	68	....	1	....	....	....	1	1	....	9	25	21	6	2	2	1	....
	P...	166	....	4	....	....	....	4	1	5	18	51	45	20	14	4	1	3
Puerperal Septicæmia	M...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	F...	3	....	....	....	....	....	....	....	....	....	2	1	....	....	....	....	....
	P...	3	....	....	....	....	....	....	....	....	....	2	1	....	....	....	....	....
Whooping Cough	M...	13	6	4	1	2	....	13	....	....	....	....	....	....	....	....	....	....
	F...	15	5	3	4	1	1	14	1	....	....	....	....	....	....	....	....	....
	P...	28	11	7	5	3	1	27	1	....	....	....	....	....	....	....	....	....
Diseases of Brain and Spinal Cord	M...	102	21	5	4	3	1	34	5	2	....	7	7	6	13	15	9	4
	F...	98	12	12	2	....	1	27	2	....	6	3	4	6	13	19	9	9
	P...	200	33	17	6	3	2	61	7	2	6	10	11	12	26	34	18	13
Diseases of Heart	M...	65	3	....	....	....	....	3	....	2	....	2	3	6	15	9	18	7
	F...	67	4	....	....	....	....	4	1	1	2	6	6	3	9	13	15	7
	P...	132	7	....	....	....	....	7	1	3	2	8	9	9	24	22	33	14
Diseases of Kidneys	M...	34	...	....	1	....	....	1	1	....	....	4	3	4	6	10	3	2
	F...	25	....	...	....	....	....	....	1	....	1	5	4	2	5	2	5	....
	P...	59	....	....	1	....	....	1	2	....	1	9	7	6	11	12	8	2
Accident	M...	28	....	1	1	....	1	3	2	1	1	6	3	5	5	2	....	....
	F...	7	....	....	2	....	1	3	1	....	1	....	....	....	....	1	1	....
	P...	35	....	1	3	....	2	6	3	1	2	6	3	5	5	3	1	....
Homicide	M...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	F...	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
	P...	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Suicide	M...	4	....	....	....	....	....	....	....	....	....	1	3	....	....	....	....	....
	F...	2	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
	P...	6	....	....	....	....	....	....	....	....	....	2	3	....	....	1	....	....
Unknown and Ill-defined	M...	48	29	2	4	....	1	36	....	....	....	.. .	1	1	5	1	2	2
	F...	66	37	3	....	2	....	42	2	1	....	1	3	2	2	3	3	7
	P...	114	66	5	4	2	1	78	2	1	....	1	4	3	7	4	5	9
All other causes	M...	127	44	3	1	1	....	49	3	2	1	8	6	6	8	17	10	17
	F...	169	46	4	1	....	1	52	4	1	2	15	11	14	11	15	19	25
	P...	296	90	7	2	1	1	101	7	3	3	23	17	20	19	32	29	42

Still-births: M = 57
F = 34
P = 91

REPORT OF THE OVERSEERS OF THE POOR

CENTRAL SQUARE BUILDING, CAMBRIDGE, December 11, 1899.

To the Honorable, the City Council of the City of Cambridge: —

GENTLEMEN: The Board of Overseers of the Poor respectfully present their twenty-second annual report for the year ending November 30, 1899. The Board was organized in May 1877.

Mr. William W. Burrage was re-elected by the City Council in March, last, for the term of five years, he having been a member of the Board since May 1890.

In the last report of the Board reference was made to the increased number of applicants for relief. General prosperity in business affairs had not then extended over the East. The aspect of affairs has now changed. More opportunities for employment have been afforded the poor and their condition has materially improved. As a consequence, there has been a less number of dependents upon the bounty of the City except in cases of insanity. Under the present conditions it would seem that the number of persons who will require aid from the City now constitute a normal and permanent class.

A new system of investigation has been inaugurated also by the Board which has proved of value in the conduct of the department, inasmuch as it has afforded an opportunity to make a closer inspection of the homes of the poor and their financial condition and actual need.

At the beginning of the year the usual estimates for the year were submitted to the City Council and the following appropriations were made for the different branches of this department: —

Outside Aid	$49,500 00
Almshouse	22,000 00
Farm	5,300 00
House Offal	26,000 00
City Physician's Salary	1,500 00
Subsequently an additional appropriation and transfer were made to Outside Aid	750 00

The following were the actual expenditures and receipts for the year: —

OUTSIDE AID.

Expenditures	$50,207 51
Receipts	5,730 49
Net cost	$44,477 02

ALMSHOUSE.

Expenditures	$21,918 08
Receipts	845 71
Net cost	$21,072 37

FARM.

Expenditures	$5,260 91
Receipts	6,049 47
Net gain	$788 56

CITY PHYSICIAN.

Expenditures	$1,500 00

HOUSE OFFAL.

Expenditures	$25,958 65
Receipts	6,997 40
Net cost	$18,961 25

The following list contains the number of persons at institutions for whose support the City has been liable during the year: —

City Almshouse	224
State Insane Hospitals	177
State Almshouse, insane, 10; paupers, 21	31
State Farm, insane	7
State Hospital for Epileptics	6
Massachusetts School for Feeble Minded	12
Baldwinville Hospital Cottages	2
Insane in families	4
	463

The insane hospitals include ten at the Danvers Insane Hospital, seventy-five at the Worcester Insane Hospital, fifteen at the Worcester Insane Asylum, one at the Taunton Insane Hospital, seventeen at the Westboro Insane Hospital, eighteen at the Foxboro Dipsomaniac Hospital, forty at the Medfield Insane Asylum, ten in the insane ward at the State Almshouse at Tewksbury, seven in the insane ward at Bridgewater. Three insane females and one insane male have been boarded in families, all under the supervision of the State Board of Insanity. There have been twenty-one mildly insane cases at the Cambridge Almshouse, in addition to the other insane supported by the City.

The amount paid to the State Insane Hospitals, State Almshouse, State Farm, and private families for the 204 insane, has been $26,243.79, which is $367.74 more than last year.

The relatives and friends of the insane, supported by the City, have paid $1,357.71 into the City Treasury, and other persons have paid $231.53.

Other cities and towns have re-imbursed the City to the amount of $1,954.01, for aid rendered their poor living in Cambridge. The State Treasurer has paid $2,187.24 for the support of cases having no settlement which were aided from the office of the Board.

There have been 467 histories taken of new applicants for relief; 198 of these families had a settlement in Cambridge, 54 families were settled in other cities and towns, and 215 families had no settlement. There have been 610 visits made and 298 days tax examinations.

The City Physician has made 1,527 visits upon 219 patients at the Almshouse, and he has also made 1,510 visits upon 576 patients outside of the institution. There has been paid $350.20 for Outside Aid medicines, and $330.09 for Almshouse medicines. Fifty-one dollars and thirty-seven cents has been paid for Outside surgical appliances, and $23.50 at the Almshouse. One hundred and eighty-four dollars has been paid for Outside additional service and $10.00 for inside service during the absence of the City Physician. A suitable microscope has been purchased during the year to aid in the investigations of the City Medical Department. Forty-eight persons have received burial in the Cambridge Cemetery on Outside Aid account, and seven persons on the Almshouse account.

There have been 224 inmates in the Almshouse during the year, and there remained ninety-three persons on November 30.

There have been 424 families embracing 1,272 persons aided from the office of the Board during the past year. Seventy-eight of these families lived in Wards 1 and 5, embracing 234 persons, the population being 28,105. In Wards 2 and 4 were 235 families relieved, consisting of 705 persons, the population being 48,789. In Ward 3 there were 111 families assisted, including 333 persons, the population being 13,713. The total population of the city was 90,607, as estimated from figures furnished from the office of the City assessors.

RECAPITULATION.

Total expenditures for Outside Aid, Almshouse, Farm	$77,386 50
Receipts for the same	12,625 67
Net cost of care of the Poor	$64,760 83

ADDITIONAL RECAPITULATION.

Net cost of Poor to the City	$64,760 83
Add profit from Farm	788 56
Net cost of Poor with gain from Farm	$65,549 39
Net expense of Almshouse for the year	21,072 37
Net expense Insane outside of the Almshouse, as estimated	25,396 01
Amount carried forward	$46,468 38

Amount brought forward	$46,468 38
Net expense of aid to families outside of the Almshouse as estimated .	19,081 01
Total net cost of Poor with gain from Farm	$65,549 39
Deduct Gain from Farm	788 56
Net cost of Poor to the City	$64,760 83
Salary of the City Physician	1,500 00

It will be noticed that the receipts in all the different branches of this department have been less during the past year than the year before. This decrease with the additional cost of the insane accounts for the increased net cost this year of the poor to the City.

Respectfully submitted.

CHARLES WALKER, *Ward 4,*
(Chairman.)
ALEXANDER MILLAN, *Ward 1.*
WILLIAM W. BURRAGE, *Ward 2.*
STEPHEN ANDERSON, *Ward 3.*
CHARLES BULLOCK, *Ward 5.*
} *Overseers of the Poor.*

REPORT OF THE WARDEN OF THE ALMSHOUSE

CAMBRIDGE, December 1, 1899.

To the Overseers of the Poor : —

Gentlemen : The annual report of the Almshouse for the year ending November 30, 1899, is herewith respectfully submitted.

The whole number in the Almshouse during the year has been as follows : —

Males	133
Females	91
Total	224
Adults	194
Minors	30
Whole number of in the Almshouse, November 30, 1899	93
Average number during the year	107

Included in the whole number in the Almshouse, November 30, 1899, there are : —

INSANE OR DEMENTED.

Males	5
Females	10
Total	15

IDIOTIC OR IMBECILE.

Males	1
Females	1
Total	2

BLIND.

Males	2
Females	2
Total	4

EPILEPTIC.

Males	0
Females	2
Total	2

Included in the whole number discharged during the year, are twenty-five persons sent to other institutions as follows: —

To Boston Almshouse	1
Cambridge Hospital	2
Carney Hospital	3
Holy Ghost Hospital	2
Home for Destitute Catholic Children	3
Massachusetts Charitable Eye and Ear Infirmary	1
Massachusetts General Hospital	1
Middlesex County House of Correction	1
Soldiers' Home, Togus, Me.	1
Somerville Almshouse	1
State Home, Roxbury	6
State Lunatic Hospital, Worcester	3

Remaining in the Almshouse November 30, 1899: —

Males	50
Females	43
Adults	90
Minors, 1 boy; 2 girls; all dependent children	3

All statistics of general interest will be exhibited by the following tables: —

TABLE I.

Showing the Number and Sex of Adult Persons and Minors of all Classes received into the Almshouse in each Month of the Year ending November 30, 1899.

Months.	Adults.		Minors.		Total.	Dependent Children.		Neglected Children.	
1898.	M.	F.	M.	F.		M.	F.	M.	F.
December	10	5	2	0	17	2	0	0	0
1899.									
January	7	4	2	1	14	2	1	0	0
February	2	2	1	0	5	1	0	0	0
March	3	2	1	1	7	1	1	0	0
April	3	3	0	0	6	0	0	0	0
May	3	0	1	0	4	1	0	0	0
June	3	0	0	0	3	0	0	0	0
July	2	0	3	1	6	3	1	0	0
August	2	2	2	1	7	2	1	0	0
September	3	5	0	1	9	0	1	0	0
October	6	1	0	0	7	0	0	0	0
November	7	8	0	2	17	0	2	0	0
Totals	51	32	12	7	102	12	7	0	0

TABLE II.

Showing the Number and Sex of Adult Persons and Minors of all Classes discharged from the Almshouse in each Month of the Year ending November 30, 1899.

Months.	Adults.		Minors.		Total.	Dependent Children.		Neglected Children.	
1898.	M	F	M	F		M	F	M	F
December	5	5	1	0	11	1	0	0	0
1899.									
January	1	6	1	1	9	1	1	0	0
February	10	1	3	1	15	3	1	0	0
March	4	2	2	1	9	2	1	0	0
April	11	3	1	0	15	1	0	0	0
May	10	1	2	1	14	2	1	0	0
June	7	3	0	1	11	0	1	0	0
July	2	2	5	2	11	3	2	2	0
August	2	2	1	0	5	1	0	0	0
September	4	5	1	0	10	1	0	0	0
October	4	4	0	1	9	0	1	0	0
November	6	4	0	2	12	0	2	0	0
Totals	66	38	17	10	131	15	10	2	0

TABLE III.

Showing the name, age, time of admission, date and cause of death of each person who has died in the Almshouse during the year ending November 30, 1899.

Names.	Age.	Date of Admission.	Date of Death.	Cause of Death.
Wilfred Laurier	50	Nov. 11, 1898.	Dec. 3, 1898.	Pulmonary Consumption.
Jeremiah Sheehan	63	Dec. 22, 1897.	Dec. 7, 1898.	Chronic Bronchitis.
James Prendable	70	May 1, 1882.	Dec. 23, 1898.	Senile Debility and Exhaustion.
Maria Smith	77	April 5, 1878.	Jan. 11, 1899.	Senile Debility.
Catherine Flemming	55	Jan. 7, 1899	Jan. 24, 1899.	Multiple Sclerosis.
Matilda S. Patch	85	Oct. 7, 1896.	Jan. 28, 1899.	Senile Debility and Exhaustion.
William Wilkinson	78	Nov. 23, 1894.	Feb. 1, 1899.	Pneumonia.
Francis A. Morse	80	Sept. 25, 1896.	Feb. 11, 1899.	Pneumonia
Timothy O'Connor	80	July 15, 1895.	Feb. 26, 1899.	Senile Debility and Exhaustion.
Timothy F. Coughlin	47	Mar. 23, 1896.	Feb. 28, 1899.	Apoplexy, Paralysis and Intestinal Hemorrhage.
James Schultz	85	May 23, 1898.	Feb. 28, 1899.	Senile Debility.
Bryan Killian	65	Nov. 30, 1894.	Mar. 1, 1899.	Pneumonia.
Timothy J. McGillicuddy	76	Dec. 15, 1893.	Apr. 22, 1899.	Chronic Alcoholism.
Maurice Walsh	76	Apr. 5, 1897.	May 14, 1899.	Cardiac Thrombosis.
Roy Eagan	2 mos.	July 13, 1899.	July 18, 1899.	Meningitis.
Mary A. Quinn	76	Sept. 20, 1897.	July 27, 1899.	Apoplexy.
Mary Barrett	70	Apr. 7, 1890.	Aug. 13, 1899.	Senile Debility and Exhaustion.
Mary E. Donovan	44	Sept. 30, 1899.	Oct. 8, 1899.	Cerebral Embolism.
James Norton	50	Oct. 3, 1899.	Oct. 16, 1899.	Pulmonary Consumption.
Margaret Hyslop	72	Nov. 8, 1899.	Nov. 21, 1899.	Apoplexy, Paralysis and Exhaustion.
Joseph Fitzgerald	56	Apr. 23, 1898.	Nov. 25, 1899.	Tuberculosis.

PRODUCTS OF THE FARM WITH THEIR APPROXIMATE VALUES.

560 bushels string beans	$670 00
150 bushels beets	90 00
620 dozen bunches beets	200 00
40 bushels beet greens	12 00
11,000 cabbages	650 00
300 bushels carrots	150 00
30 dozen bunches carrots	6 00
290 boxes celery	880 00
25,000 cucumbers	250 00
780 bushels dandelions	250 00
600 dozen eggs	150 00
1,500 dozen lettuce	450 00
400 bushels onions	240 00
160 bushels parsnips	120 00
1,200 pounds pie-plant	40 00
8,500 pounds pork	410 00
1,250 dozen bunches radishes	240 00
580 bushels spinach	150 00
2 tons squash	32 00
850 bushels tomatoes	460 00
	$5,450 00

COMPARATIVE TABLE OF ALMSHOUSE, FARM, LEDGE, AND HOUSE OFFAL RECEIPTS FOR NINETEEN YEARS ENDING NOVEMBER 30, 1899.

Years.	Board.	Chair Shop.	Farm.	General Sales.	Stone.	House Offal.	Totals.
1881	$322 56	.....	$378 50	.....	$2,529 01	$5,536 88	$8,766 95
1882	705 34	.....	436 54	.....	2,626 17	5,705 22	9,473 27
1883	1,174 96	.....	476 22	$14 19	2,622 00	5,819 55	10,106 92
1884	1,480 93	.....	316 76	.....	4,238 77	6,449 96	12,486 42
1885	2,035 58	.....	335 32	149 85	4,509 84	7,354 26	14,384 95
1886	613 93	$37 50	772 14	319 75	5,611 38	6,926 23	14,280 93
1887	514 64	634 19	1,595 10	241 37	4,684 14	6,856 59	14,526 03
1888	557 28	614 94	2,846 52	213 62	6,662 26	6,721 50	17,617 86
1889	274 84	479 28	3,684 59	144 36	5,564 18	7,324 61	17,471 06
1890	302 49	794 36	4,364 03	150 89	5,651 38	7,386 33	18,649 48
1891	1,201 33	844 62	5,213 68	161 71	6,107 86	7,716 77	21,245 97
1892	1,253 06	899 81	5,371 60	166 45	5,220 50	7,535 57	20,447 55
1893	703 70	325 86	6,400 64	210 09	5,826 74	7,033 52	20,500 05
1894	1,094 89	220 07	6,504 66	615 69	7,955 42	8,218 96	24,609 69
1895	622 77	77 00	6,512 63	160 19	8,265 14	9,045 55	24,682 78
1896	834 52	61 25	5,623 67	147 02	7,639 48	9,155 35	23,461 24
1897	1,294 65	3 60	5,348 47	137 33	10,335 16	7,228 79	24,348 00
1898	1,038 19	.....	5,730 13	277 40	2,172 60	7,264 09	16,482 41
1899	703 17	.....	6,049 47	142 54	.....	6,997 40	13,892 58
Totals	$16,728 33	$4,992 48	$67,960 62	$3,252 45	$98,222 03	$136,276 23	$327,433 14

The general improvement in business and the demand for labor in all industrial occupations has operated, together with other causes, to reduce the numbers in the Almshouse, and we close the year with the smallest census in the last seventeen years.

Your Board is congratulated upon the fact that you have been able,

by an increased appropriation for the past year, to make some improvements in the Almshouse, which will add materially to the comfort of the inmates and prove a source of economy as well.

Our heating apparatus has been thoroughly rearranged, so as to secure an increase and more even distribution of heat and a considerable saving of fuel.

The dining-room of the women has been lathed and plastered, a new floor laid, new dining-room chairs and table furniture supplied, the whole room now presenting a neat and inviting appearance.

The wing of the building occupied by the women has been also greatly improved by the introduction of modern water-closets with sanitary plumbing throughout.

A commodious ice-chest has been built, so located as to receive the ice directly from the outside of the building, by which we secure greater cleanliness, convenience and economy.

If the appropriation for next year is sufficient to warrant the undertaking, it is proposed during the coming summer to extend the work of renovation and improvement to the dining-room of the men.

The long-continued drought of the past summer greatly injured our farm crops, but the better prices received for our products compensated us financially, and our cash receipts from this source for the year are considerably in excess of the average annual receipts of several years immediately previous.

Our acknowledgement of obligation is due to the clergymen of Cambridge and vicinity who have kindly conducted our Sunday services; to many kind friends who have given us acceptable reading matter for our people; to those who have remembered us by generous gifts for our holiday festivities; to our officers and employes for prompt and faithful services cheerfully rendered; and to all the members of your Board for your humane and intelligent interest and valuable assistance in conducting the affairs of an important and useful charity.

Respectfully submitted,

MARTIN L. ELDRIDGE,
Warden.

REPORT OF THE CITY PHYSICIAN

CAMBRIDGE, MASS., December, 1, 1899.

To the Honorable, the City Council of the City of Cambridge: —

GENTLEMEN: I have the honor to present the following report of the doings of this office for the year ending November 30, 1899: —

ALMSHOUSE.

Number of visits to Almshouse	158
Number of persons treated therein	219
Number of professional visits to same	1,527
Number of births	2
Number of deaths	21
Cost of medicines and surgical appliances	$330.09

OUTSIDE AID.

Number of persons attended by direction of Overseers of the Poor	576
Number of professional visits to same	1,510
Number of examinations as to sanity	96
Number of certificates of insanity issued	45
Number of births	6
Number sent to hospitals for treatment	16
Number vaccinated	0
Number of deaths	15
Cost of medicines and surgical appliances	$356.20

DEPARTMENTAL SERVICE AND TOTALS.

Number of persons visited at police stations	43
Number of visits to same	43
Number visited for the Soldiers Aid Committee	1
Number of civil service examinations	60
Number of vaccinations by direction of the School Committee	535
Total number vaccinated	541
Number of persons examined for the legal department	29
Total number of persons receiving professional attention	1,469
Total number of visits to same	3,711
Total number of deaths	36
Total number of certificates of death issued	39
Total amount expended for medicines and surgical appliances	$686.29

Respectfully,

LEWIS L. BRYANT,
City Physician.

REPORT OF THE SCHOOL COMMITTEE FOR 1899

In compliance with Section 45 of the Rules of the School Board, the Superintendent herewith submits his twenty-fifth annual report, it being for the year ending December 31, 1899.

POPULATION OF CAMBRIDGE.

1875	47,838	1895	81,643
1885	59,658	1899, estimated	90,607

SCHOOL CENSUS.

[Taken for the first time in September.]

Number of children in the city five years old or more, but less than fifteen.

1885 (taken in May)	10,957	1895 (taken in May)	12,869
1890 (taken in May)	11,971	1899, boys, 6,758; girls, 7,022	13,780

SCHOOLS AND CLASSROOMS.

Latin School	1	Classrooms in use	11
English High School	1	" " "	11
Manual Training School	1	" " "	4
Grammar Schools	7	" " "	93
Primary Schools	19	" " "	93
Grammar and Primary Schools	9	" " "	93
Kindergartens	12	" " "	12
Evening Drawing Schools	2	" " "	5
Evening High School	1	" " "	10
Evening Elementary Schools	4	" " "	16
Whole number of Day Schools			50
Number of classrooms for Day Schools			317

HIGH SCHOOLHOUSES.

Schoolhouses	Number of Classrooms	Estimated Value	Size of Lots, Square Feet	Estimated Value	Total Value
Latin	15	$250,000	79,759	$45,000	$295,000
English High	11	220,000	74,366	18,000	238,000
Manual Training	4	56,000	81,128	44,000	100,000
Total	30	$526,000	235,253	$107,000	$633,000

GRAMMAR SCHOOLHOUSES.

Schoolhouses	Number of Classrooms	Estimated Value	Size of Lots, Square Feet	Estimated Value	Total Value
Agassiz*	7	$17,400	19,689	$6,600	$24,000
Allston*	12†	30,000	15,193	4,600	34,600
Ellis	12†	41,800	25,700	6,200	48,000
Fayette Street	9	40,000	37,828	15,900	55,900
Harvard	16†	44,000	20,494	12,000	56,000
Lee Street	6	10,000	10,100	5,000	15,000
Morse*	14†	73,000	25,650	7,000	80,000
Peabody*	14†	67,000	21,813	8,000	75,000
Putnam	13†	60,000	14,400	14,300	74,300
Roberts	12†	35,500	16,400	12,000	47,500
Russell*	10†	41,000	33,073	4,000	45,000
Shepard*	11	30,000	14,755	7,000	37,000
Sleeper*	8	24,800	21,284	4,200	29,000
Taylor*	10†	38,000	23,592	7,000	45,000
Thorndike	12	30,000	10,027	4,000	34,000
Washington	12	25,000	14,951	10,000	35,000
Webster	16†	50,000	25,839	9,000	59,000
Wellington* ‡	13†	42,000	27,673	8,300	50,300
Total	207	$699,500	378,461	$145,100	$844,600

* Used for grammar and primary grades. † Also an assembly hall.
‡ On the same lot there is another schoolhouse containing four rooms used for primary classes.

PRIMARY SCHOOLHOUSES.

Schoolhouses	Number of Classrooms	Estimated Value	Size of Lots, Square Feet	Estimated Value	Total Value
Boardman	8	$12,000	10,018	$4,500	$16,500
Corlett*	2	3,000	10,000	1,000	4,000
Cushing	2	3,000	14,787	1,500	4,500
Dana	4	2,000	14,317	4,300	6,300
Dunster	4	4,000	10,000	2,000	6,000
Felton	4	6,000	15,090	4,500	10,500
Gannett	5	12,000	15,434	3,000	15,000
Gore	12	25,000	9,900	4,000	29,000
Holmes	4	6,000	11,182	4,500	10,500
Lassell	4	8,000	10,000	2,500	10,500
Lowell	4	7,000	12,033	2,500	9,500
Otis	8	20,000	8,270	4,000	24,000
Parker	6	19,000	12,329	7,000	26,000
Reed	4	4,000	12,000	1,200	5,200
Riverside	4	5,000	11,198	3,000	8,000
Sargent	4	3,000	9,995	4,000	7,000
Stearns	4	3,000	10,050	5,000	8,000
Tarbell	4	8,000	19,500	4,000	12,000
Willard	12	25,000	20,079	5,000	30,000
Wyman	6	6,000	14,347	3,500	9,500
Primary, Total	105	$181,000	250,529	$71,000	$252,000
Grammar, "	207	699,500	378,461	145,100	844,600
High Schools "	30	526,000	235,253	107,000	633,000
Summary	342	$1,406,500	864,243	$323,100	$1,729,600

* Used for a kindergarten.

NUMBER OF TEACHERS IN THE DAY SCHOOLS.

[Special teachers are included in the total.]

December	Latin School	English High School	Manual Training School	Grammar Schools	Primary Schools	Kinder-gartens	Total
1895	14	21	Became a public school, Jan. 1, 1899.	146	116	16	322
1896	15	21		151	124	17	337
1897	16	23		157	127	22	354
1898	16	23		161	133	22	364
1899	19	23	14	170	138	24	396

ATTENDANCE AT ALL THE DAY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1895	13,571	11,505	10,611	92.2
1896	13,992	11,957	11,068	92.6
1897	14,373	12,317	11,397	92.5
1898	15,026	12,907	11,978	92.8
1899	15,753	13,255	12,285	92.6

ATTENDANCE AT THE LATIN SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1895	380	354	334	94.3
1896	411	373	351	94.2
1897	387	358	339	94.5
1898	398	362	343	94.7
1899	398	371	351	94.8

ATTENDANCE AT THE ENGLISH HIGH SCHOOL.

Year	Number of Pupils Registered*	Average Number Belonging*	Average Daily Attendance*	Per cent of Attendance*
1895	743	648	626	96.7
1896	733	632	611	96.6
1897	714	644	622	96.7
1898	773	685	662	96.7
1899	794	688	666	96.7

* Includes the Manual Training School Pupils.

ATTENDANCE AT THE GRAMMAR SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendanee	Per cent of Attendance
1895	5,926	5,204	4,888	93 9
1896	6,069	5,439	5,105	93.9
1897	6,318	5,682	5,351	94.2
1898	6,570	5,883	5,548	94.3
1899	7,008	6,107	5,738	93.9

ATTENDANCE AT THE PRIMARY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendanee	Per cent of Attendanee
1895	5,928	4,925	4,499	91.3
1896	6,138	5,117	4,680	91.4
1897	6,308	5,192	4,741	91.3
1898	6,505	5,429	4,984	91.8
1899	6,750	5,514	5,071	91.9

ATTENDANCE AT THE KINDERGARTENS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendanee
1895	594	374	264	70.6
1896	641	396	321	81 2
1897	646	441	344	78 1
1898	780	548	441	80.4
1899	803	575	459	79.9

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE LATIN SCHOOL.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1895	54	14 years 6 months	48	14 years 5 months
1896	47	14 years 4 months	54	14 years 6 months
1897	61	14 years 7 months	52	14 years 7 months
1898	49	14 years 8 months	56	14 years 3 months
1899	58	14 years 5 months	51	14 years 4 months

NUMBER OF PUPILS GRADUATED FROM THE LATIN SCHOOL.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1895	16	18 years 9 months	9	18 years 11 months
1896	16	18 years 0 months	18	18 years 6 months
1897	21	19 years 1 month	14	18 years 6 months
1898	16	18 years 1 month	27	18 years 3 months
1899	16	18 years 3 months	27	18 years 5 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1895	55	14 years 9 months	140	15 years 0 months
1896	61	14 years 7 months	131	15 years 2 months
1897	57	14 years 9 months	150	15 years 0 months
1898	60	14 years 8 months	169	15 years 1 month
1899	61	15 years 0 months	152	15 years 0 months

NUMBER OF PUPILS GRADUATED FROM THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1895	14	18 years 8 months	40	18 years 4 months
1896	12	18 years 7 months	50	18 years 4 months
1897	14	18 years 1 month	56	18 years 9 months
1898	19	18 years 9 months	64	18 years 5 months
1899	14	18 years 4 months	45	18 years 6 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE MANUAL TRAINING SCHOOL, WITH THE NUMBER OF GRADUATES.

Year	Admitted	Average Age	Graduated	Average Age
1895	63	15 years 2 months	35	17 years 8 months
1896	59	15 years 6 months	10	18 years 6 months
1897	84	15 years 4 months	20	18 years 6 months
1898	70	15 years 5 months	14	18 years 2 months
1899	92	15 years 3 months	13	18 years 6 months

NUMBER OF PUPILS GRADUATED FROM THE GRAMMAR AND PRIMARY SCHOOLS.

Year	Grammar Schools. Course, 6 yrs.	Average Age	Primary Schools. Course, 3 yrs.	Average Age
1895	491	14 years 9 months	1,209	9 years 10 months
1896	467	14 years 10 months	1,273	9 years 9 months
1897	521	14 years 11 months	1,292	9 years 9 months
1898	518	15 years 0 months	1,395	9 years 8 months
1899	553	15 years 0 months	1,393	9 years 8 months

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE GRAMMAR SCHOOLS.

Year	In 4 years	In 5 years	In 6 years	In 7 years or more
1895	9 per cent	30 per cent	46 per cent	15 per cent
1896	8 per cent	33 per cent	49 per cent	10 per cent
1897	6 per cent	30 per cent	51 per cent	13 per cent
1898	6 per cent	29 per cent	47 per cent	18 per cent
1899	6 per cent	31 per cent	47 per cent	16 per cent

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE PRIMARY SCHOOLS.

Year	In 2 years	In 2½ years	In 3 years	In 3½ years	In 4 years	In 4½ years or more
1895	5 per cent	1 per cent	56 per cent	5 per cent	23 per cent	10 per cent
1896	7 per cent	2 per cent	60 per cent	3 per cent	21 per cent	7 per cent
1897	2 per cent	3 per cent	63 per cent	4 per cent	21 per cent	7 per cent
1898	4 per cent	2 per cent	59 per cent	6 per cent	20 per cent	9 per cent
1899	3 per cent	4 per cent	58 per cent	7 per cent	20 per cent	8 per cent

NUMBER OF PUPILS IN THE LATIN SCHOOL, DECEMBER, 1899.

Grade	Boys	Girls	Total	Per cent
Fourteenth	27	25	52	.126
Thirteenth	28	45	73	.176
Twelfth	38	44	82	.198
Eleventh	37	50	87	.210
Tenth	64	56	120	.290
Total	194	220	414	

NUMBER OF PUPILS IN THE ENGLISH HIGH SCHOOL, DECEMBER, 1899.

Grade	Boys	Girls	Total	Per cent
Thirteenth	29	51	80	.146
Twelfth	27	64	91	.167
Eleventh	32	114	146	.268
Tenth	65	164	229	.419
Total	153	393	546	

NUMBER OF PUPILS IN THE MANUAL TRAINING SCHOOL, DECEMBER, 1899.

Grade	Boys	Girls	Total	Per cent
Thirteenth	22	This school is for boys only It became a part of the public school system, January 1, 1899.		.111
Twelfth	41			.206
Eleventh	50			.251
Tenth	86			.432
Total	199			

NUMBER OF PUPILS IN THE GRAMMAR SCHOOLS, DECEMBER, 1899.

Grade	Boys	Girls	Total	Per cent
Ninth	236	292	528	.031
D	50	48	98	.015
Eighth	309	355	664	.102
C	66	82	148	.023
Seventh	427	462	889	.136
Sixth	582	538	1,120	.171
B	111	124	235	.036
Fifth	597	604	1,201	.184
A	137	192	329	.050
Fourth	666	650	1,316	.202
Total	3,181	3,347	6,528	

NUMBER OF PUPILS IN THE PRIMARY SCHOOLS, DECEMBER, 1899.

Grade	Boys	Girls	Total	Per cent
Third	792	787	1,579	.275
Second	923	973	1,896	.330
First	1,160	1,110	2,270	.395
Total	2,875	2,870	5,745	

NUMBER OF PUPILS AND TEACHERS IN THE KINDERGARTENS.

Year	Boys	Girls	Total	Number of Teachers
1897	254	329	583	22
1898	265	339	604	22
1899	331	337	668	24

NUMBER OF PUPILS BELONGING TO THE EVENING DRAWING SCHOOLS, WITH THE AVERAGE ATTENDANCE,

1894	1895	1896	1897	1898	1899
217	212	193	209	182	194
103	117	103	114	99	99

NUMBER OF PUPILS BELONGING TO THE EVENING SCHOOLS, WITH THE AVERAGE ATTENDANCE.

1894	1895	1896	1897	1898	1899
1,379	1,246	1,128	1,225	1,165	1,158
542	478	445	448	494	452

NUMBER OF PUPILS IN THE PRIVATE SCHOOLS IN CAMBRIDGE, INCLUDING THOSE IN THE PAROCHIAL SCHOOLS.

1894	1895	1896	1897	1898	1899
2,492	2,557	2,518	2,512	2,637	2,713

COST OF INSTRUCTION IN THE EVENING SCHOOLS.

Year	Elementary	High	Drawing	Total
1894	$2,293 00	$1,396 00	$1,175 00	$4,864 00
1895	2,427 00	1,422 50	1,255 00	5,104 50
1896	2,104 00	1,321 50	1,110 00	4,535 50
1897	2,086 00	1,274 50	1,060 00	4,420 50
1898	2,324 00	1,439 00	1,091 00	4,854 00
1899	2,570 00	1,499 00	1,206 00	5,275 00

COST OF INSTRUCTION IN THE DAY SCHOOLS.

[Salaries of teachers, superintendent, supervisor, agent, clerks, and truant officers.]

Year	Number of Teachers in December	Average Number of Pupils	Whole cost	Cost per Pupil
1876	176	7,066	$164,818 00	$23 32
1878	173	7,028	136,491 20	19 42
1880	182	7,175	130,371 75	18 17
1882	200	7,898	137,328 55	17 38
1884	216	8,414	152,290 62	18 09
1886	233	9,218	165,277 42	17 92
1888	241	9,756	175,773 80	18 02
1890	263	10,089	190,558 21	18 89
1892	284	10,861	207,144 22	19 07
1894	312	11,166	228,873 48	20 50
1895	322	11,505	235,811 62	20 50
1896	337	11,957	245,104 01	20 50
1897	354	12,317	255,397 92	20 73
1898	364	12,907	268,182 97	20 78
1899	396	13,255	305,744 87	23 06

COST OF THE DAY SCHOOLS.

[This includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, and the care and repair of schoolhouses.]

Year	Number of Teachers in December	Average Number of Pupils	Whole cost	Cost per Pupil
1876	176	7,066	$200,894 09	$28 43
1878	173	7,028	162,437 77	23 11
1880	182	7,175	153,967 56	21 45
1882	200	7,898	166,230 52	21 04
1884	216	8,414	203,234 56	24 15
1886	233	9,218	207,536 46	22 51
1888	241	9,756	225,408 57	23 10
1890	263	10,089	241,980 84	23 98
1892	284	10,861	266,651 02	24 55
1894	312	11,166	287,137 37	25 72
1895	322	11,505	299,085 93	26 00
1896	337	11,957	316,090 83	26 44
1897	354	12,317	327,319 90	26 57
1898	364	12,907	345,566 30	26 77
1899	396	13,255	389,915 63	29 41

SUMMARY OF THE SCHOOL CENSUS OF SEPTEMBER, 1899.

[The statutes make it the duty of the School Committee to ascertain annually the names and ages of all persons between the ages of five and fifteen belonging in their respective towns and cities on the first of September.]

Number of children in the city between five and fifteen	13,780
Number in public schools between five and fifteen	11,013
Number in public schools fifteen years old or more	1,639
Number in private schools between five and fifteen	2,067
Number not attending school between five and seven	447
Number not attending school between seven and fourteen	135
Number not attending school between fourteen and fifteen	118
Whole number not attending school between five and fifteen	700
Number in the city between five and six	1,520
Number in the city between seven and fourteen	9,697

FINANCES.

[For the financial year ending December 1, 1899.]

Cost of instruction in day schools	$305,744 87
Cost of instruction in evening schools	5,275 00
Cost of care and repair of schoolhouses, day schools	59,817 74
Cost of care and repair of schoolhouses, evening schools	1,600 50
Cost of text-books and snppplies	20,697 21
Expended for incidentals	1,574 90
Expended for care of truants	1,831 34
Expended for flags	249 57
Expended for new Latin schoolhouse	63,493 10
Expended for Ellis schoolhouse	21,210 16
Expended for addition to Peabody schoolhouse	17,386 18
Expended for Roberts schoolhouse	32,770 52
Expended for furniture for Latin schoolhouse	23,659 96
Expended for furniture for Ellis schoolhouse	2,873 59
Expended for furniture for Peabody schoolhouse	2,253 83
Expended for furniture for Roberts schoolhouse	2,928 79
Expended for furniture for different buildings	505 00
Expended for rebuilding Harvard schoolhouse	23,765 48
Expended for remodelling Otis schoolhouse	7,966 00
Expended for plans for Morse and Putnam schoolhouses (heating)	1,263 76
Expended for changes in Morse and Putnam schoolhouses	31,909 94
Expended for improvements in sanitary arrangements	13,913 00
Total expenditure for all school purposes	$642,690 44
Deducting from the above the amount received from the Hopkins Fund, $685 65, the tuition of State Wards, $453.50, and the tuition of non-resident pupils, $4,533 00, the actual cost of the schools to the city is	$637,018 29
Assessed value of real and personal estates, May, 1899	$91,542,795 00
Ratio of expenditure for school purposes to the valuation of 1899	.0069

STATISTICS TAKEN FROM THE SIXTY-THIRD ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF EDUCATION.

Number of cities and towns: cities, 32; towns, 321	353
Number of public schools	10,121
Number of pupils of all ages in the public schools during the year	471,977
Number of persons over fifteen years of age attending the public schools	45,318
Per cent of attendance based upon the average membership	92
Number of persons employed as teachers in the public schools during the year: men, 1,197; women, 12,205	13,402
Number of teachers who have graduated from normal schools	5,404
Average number of months the public schools have been kept for the entire year	9 mos., 8 days
Number of high schools	262
Number of teachers in high schools	1,440
Number of pupils in high schools	40,003
Amount expended upon the public schools, exclusive of the expense of school buildings	$10,286,528 01
Cost of new schoolhouses, permanent improvements, and ordinary repairs	3,603,310 20
Entire expenditure for public school purposes	$13,889,838 21

TABULAR VIEW.

December 31, 1899.

Prepared by the Secretary of the School Committee.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Latin	William F Bradbury	$3,000	414
	Theodore P. Adams	2,000	
	John I. Phinney	2,000	
	Max Benshimol	1,200	
	Helen M. Albee*	950	
	Constance Alexander	900	
	Mary A. Bachelder	850	
	Alice C. Baldwin	900	
	Isabel S. Burton	800	
	Mabel L. Chamberlain	950	
	Etta L. Davis	500	
	Caroline Drew	950	
	Mary C Hardy	950	
	Rose Hardwick	900	
	Mabel E. Harris	800	
	Helen W. Munroe	800	
	Lena G. Perrigo	800	
	Lucile C. Reynolds	500	
	Ethel Vaughn Sampson	500	
	Jennie S. Spring	950	
	Annie S. Dodge†	550	
English High	Ray Greene Huling	3,000	546
	Edwin L. Sargent	2,000	
	Joseph A. Coolidge	1,600	
	Russell T. Greene	1.100	
	Grace L. Deering	1,200	
	Helen E. Andrews	800	
	Susan P. Choate	750	
	Caroline Close	950	
	Bertha L. Cogswell	950	
	Gertrude H. Crook	850	
	Esther S. Dodge	800	
	Agnes B Goerwitz	600	
	Jeannie B Kenrick	450	
	Maud A. Lawson	950	
	Henrietta E. McIntire	950	
	Mary Moulton	950	
	Lillian C. Rogers	950	
	Caroline A. Sawyer	950	
	Emma A. Scudder	950	
	Florence W. Smith	850	
	Martha R. Smith	950	
	Delia M Stickney	1,200	
	Annie F. Stratton	500	
	Martha L Babbitt†	600	

* On leave of absence for study or travel in accordance with the rules of the School Committee.
† Secretary and Librarian.

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Rindge Manual Training	Charles H Morse	$3,000	199
	Myra I. Ellis	1,300	
	Louisa P. Parker	1,000	
	Albert P Briggs	300	
	Charles J. Foskett	1,080	
	Anna M. Hathaway	800	
	Joseph M. Norton	500	
	Frederick B Scotton	950	
	Walter M. Smith	1,000	
	William E. Stark	1,400	
	James G. Telfer	1,500	
	Frederick W. Turner	1,500	
	Albert L. Ware	1,200	
	John W. Wood	800	
Agassiz Grammar	Maria L. Baldwin	1,000	134
Agassiz Primary			175
	Edith C. Arey	500	
	Addie B. Byam	600	
	Mary G. Carpenter	700	
	Mary P. Massé	700	
	Mary A Parsons	700	
	Grace C. Stedman	600	
	Jennie L. Upham	700	
Allston Grammar	Everett L. Getchell	1,000	305
Allston Primary			147
	Ella S. Danforth	700	
	Evelyn M. Dormer	550	
	Maude M. Dutton	450	
	Lucy M Fletcher	700	
	Nellie M. Foley	450	
	Jennie C. Hardy	450	
	Ella M. Leaver	700	
	Catharine A McLean	550	
	Ethel I. Murch	450	
	Esther Day Paul	550	
	Carrie L Power	450	
	Mary E Regan	450	
Ellis	Edward O Grover	2,000	478
	Nellie A. Hutchins	800	
	Caroline L. Blake	750	
	Helen W. Metcalf	700	
	Emma A. Faulkner	700	
	Harriet Foster	700	
	Charlotte L. Griswold	700	
	Louise H. Griswold	700	
	Ella M Horne	700	
	Ellen J Hunt	700	
	Flora C. Ingraham	700	
	Mabelle E. Porter	650	
	Mary A. Stephenson	700	
	Grace D. Street	700	
Harvard	James S. Barrell	2,000	852
	Arthur B Webber	1,100	
	Ada H. Wellington	800	
	Margaret B. Wellington	750	
	Anna M Brown	700	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Harvard	Addie L. Bartlett	$700	
	Frances Fabyan	700	
	Margaret M. Fearns	550	
	Estella J. French	700	
	Annie B. Lowell	700	
	Adeline M Murphy	700	
	Laura L. Parmenter	600	
	Louise C. Patterson	700	
	Harriette F. Sawin	600	
	Elizabeth L. Setchell	700	
	Annie M. Street	700	
	Helen A Tucker	550	
	Emma F. West	700	
	Hattie B. Woodward	650	
	Hortense O. Young	700	
Morse Grammar	Mary A Townsend	2,000	440
Morse Primary			203
	Mary E. Towle	800	
	Marcia E. Ridlon	700	
	Elizabeth J. Baldwin	700	
	Annie Marion Dow	700	
	Leila F. Drake	700	
	Ida M. Holden	450	
	Ida J. Holmes	700	
	Grace H. Manter	600	
	Alice E. May	700	
	Elizabeth H. Richards	650	
	Emilie F. Richardson	700	
	Mary E. Sawyer	700	
	Lucy M. Soulée	700	
	Gertrude D Sprague.	700	
	Grace A. Stone	450	
Peabody Grammar	Frederick S. Cutter	2,000	339
Peabody Primary			122
	Charlotte A Ewell	800	
	Susan Allison	700	
	Anna F. Bellows	700	
	Mary Helen Ellis	550	
	Helen E Hazard	700	
	M. Lizzie Hewitt	700	
	Effie A. Perkins	600	
	Maude R. Pullen	550	
	Dora Trefethen	450	
	Alice M. Tufts	650	
Putnam	Thomas W. Davis	2,000	596
	Frederick B. Thompson	1,300	
	Eliza M. Hussey	800	
	Henriette E de Rochemont	700	
	Mary A. Carmichael	700	
	Anna L P. Collins	700	
	Sarah M. Grieves	700	
	Hattie L. Jewell	700	
	Annie B. Josselyn	700	
	Louise A. Keeler	700	
	Hannah Louisa Kendall	450	
	Marcia L. Marple	550	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Putnam	Eliza S. Paddack	$700	
	Louise A. Stickney	700	
	Annie A. Trelegan	700	
Roberts	Benjamin W. Roberts	2,000	547
	Sara A. Bailey	800	
	Emily R. Pitkin	700	
	Susan M. Adams	700	
	Mary A. Blair	700	
	Mary M Brigham	700	
	S. Alice Fell	700	
	Susan L. Keniston	700	
	Evelyn B. Kenney	700	
	Ada M. Litchfield	700	
	Nina M. Marsh	700	
	S. Agnes Mulloney	700	
	Ida G. Smith	700	
	Caroline M. Williams	700	
Russell { Grammar	Arthur C. Wadsworth	1,900	{ 312
Russell { Primary			{ 89
	Alice G. Teele	800	
	Carrie J. Allison	600	
	Fannie P. Browning	700	
	Ella E. Buttrick	700	
	Mary A. Connelly	550	
	Edna W. Hodgkins	650	
	H. Maud McLean	650	
	Gertrude E. Russell	550	
	Loretta L Shaw	650	
Shepard { Grammar	Evelyn J. Locke	900	{ 197
Shepard { Primary			{ 44
	Mary E. Bassett	700	
	Mary F. Calnane	700	
	Florence M. Dudley	600	
	Alice M. Gage	650	
	Theresa H. Mahoney	500	
Sleeper { Grammar	A. Estelle Ingraham	900	{ 128
Sleeper { Primary			{ 143
	Emily Bissell	650	
	Mabel E. Blake	700	
	Fannie G. Flanders	700	
	Laura C. Harding	700	
	Melissa M. Lloyd	700	
	Blanche C. Trefethen	650	
Taylor { Grammar	Ella R. Avery	900	{ 98
Taylor { Primary			{ 298
	Mary A. Boland	550	
	Bridget T. Boyle	700	
	Lillian M. Canty	700	
	Anna E Callahan	700	
	Josephine Day	550	
	Cecilia F. Leahy	600	
	Maud J. Paget	450	
	Agnes M. Sheridan	700	
	Mabelle S. Welsh	450	
Thorndike	Ruel H. Fletcher	2,000	534
	Harriet A. Townsend	800	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Thorndike	Laura A. Westcott	$700	
	Grace W. Fletcher	700	
	Lena S. Frederikson	600	
	Mary A Grant	500	
	Harriet M Hanson	700	
	Emma A. Hopkins	700	
	Winifred L Kinsley	700	
	Mary E Nason	700	
	Ellen M. Plympton	700	
	Susan L Senter	650	
	Abby S. Taylor	700	
	Lydia A. Whitcher	700	
Washington	John W. Freese	2,000	386
	Leila H Sprague	800	
	Alice P Fay	700	
	Adelaide D Billings	700	
	Eldora J Clark	700	
	Mary L Ells	700	
	Ellen A. Kidder	700	
	Emma Penney	700	
	Margaret J. Penney	700	
	Hattie Shepherd	700	
	Mary E. Stiles	700	
	Marianne M. Webb	700	
Webster	John D. Billings	2,000	755
	William D. Tillson	1,100	
	Alice C. Phinney	800	
	Martha N. Hanson	750	
	Ada A Billings	700	
	Mabel T. Ashley	700	
	Margaret M Brosnahan	550	
	Charlotte M. Chase	700	
	Fanny F. Curtis	700	
	Susan I. Downs	700	
	Mary Stuart Fellows	600	
	Josephine Hills	700	
	Gertrude I. Hulbert	650	
	M. Josephine Lamprey	700	
	Minnie V. Reid	700	
	Harriette E. Shepard	700	
	Olive L. Slater	600	
	Ellen F. Watson	700	
	Katherine L Wight	450	
Boardman	Elizabeth J. Karcher	740	329
	Christina R. Denyven	700	
	Isabella M. Duguid	700	
	Isabel M. Elliot	550	
	Maud E. Kimball	650	
	Grace Morgan	700	
	C. Florence Smith	700	
	Sarah E. Stewart	700	
Cushing	Maude A. Deehan	710	87
	Eva J. Irish	600	
Dana	Georgia E. Martin	720	157
	Jane Macmaster	700	
	Matilda Macmaster	700	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Dana	Marion B. Magwire	$700	
Dunster	Susan E. Wyeth	720	112
	Mary Ellen Colby	700	
	Mary A. Doran	700	
Felton	Florence A. Rogers	720	190
	Marcia R. Bowman	600	
	S. Emma Davis	700	
	Carrie H. Smith	700	
Gannett	Mary A. Rady	725	221
	Annie M. Billings	700	
	Katherine A. Gaskill	450	
	Anna M. Jones	700	
	Augusta G. Mirick	700	
Gore	Frances E. Pendexter	760	470
	Katherine L. Dolan	500	
	Mary L Dolan	500	
	Minnie A. Doran	650	
	Kate A. Hegarty	700	
	Mary A. Hurley	550	
	Katherine L. McElroy	700	
	Mary B. McFarlane	550	
	Julia G. McHugh	700	
	Mary E Mulloney	700	
	Anastasia Peters	700	
	Jane E. Whoriskey	700	
Holmes	Lucy C. Wyeth	710	85
	Eva G. Oakes	550	
Lassell	Frances E. Whoriskey	720	166
	Rose V. Collier	700	
	Elizabeth B. Gahm	700	
	Mary E Whoriskey	650	
Lowell	Eusebia A. Minard	720	116
	Malvina M. Joslin	700	
	Agnes J. McElroy	700	
Otis	Ellen N. Leighton	735	295
	Frances Allen	700	
	Josephine M. Doherty	700	
	Luella M. Marsh	700	
	Emma J Ross	700	
	Margaret Sullivan	700	
	Ellen C. Walsh	700	
	Kate F. Wellington	700	
Parker	Mary A. Knowles	730	258
	Charlotte E. Clapp	700	
	Butella E. L. Conland	600	
	Mattie S. Cutting	550	
	Harriet R. Harrington	650	
	Agnes Marchant	700	
Reed	Margaret T. Burke	720	171
	Jennie R. Marsh	700	
	Elizabeth G. Nelligan	450	
	Julia A. Robinson	700	
Riverside	Elizabeth A. Tower	720	147
	Amanda M. Alger	700	
	Mary A. Burke	700	
Sargent	Mary A. Brown	720	192

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1899
Sargent	Christina D. Barbey	$700	
	Elmira F. Hall	700	
	Marion Prescott	500	
Stearns	Fannie E. Higgins	720	208
	Maria J. Bacon	700	
	Ellen A. Cheney	700	
	Eva A. Taylor	700	
	Hattie A. Thayer	500	
Tarbell	Emma J. Young	720	212
	Florence J. Alley	700	
	Carrie P. Pierce	700	
	Clara W Ruggli	450	
	Nellie S. Walker	500	
Willard	Amelia Wright	760	490
	Sally N. Chamberlain	700	
	M. Elizabeth Evans	700	
	Ella F. Gulliver	700	
	Julia S. Gushee	700	
	Mary E. G. Harrington	700	
	Louise W. Harris	700	
	Katherine M. Lowell	700	
	Belle Menard	700	
	Mary A. O'Hara	450	
	Eliza D. Watson	700	
	Laura Wright	700	
Wyman	M. Carrie Dickman	730	298
	Addie M. Bettinson	700	
	Mary H. Brooks	550	
	Georgianna P. Dutcher	700	
	Genevieve S. Flint	700	
	Mary M. Gilman	700	
Wellington Grammar	Herbert H. Bates	2,500	427
Wellington Primary			320
	Sarah J. Gunnison	900	
	Margaret Kidd	900	
	Mary I. Vinton	900	
	Carrie H. Stevens	800	
	Emma M Taylor	700	
	Training Class	7,703	
Kindergartens — Boardman	Mary B. Pratt	650	62
	Caroline F. Carrick	550	
Corlett	Sarah S. Wells	700	49
	Annie M Dodd	500	
Dunster	Clara A. Hall	700	47
	Caroline A. Wolcott	550	
Gannett	Carrie E. Shepherd	600	47
	Caroline A. Leighton	550	
Gore	Selma E Berthold	700	57
	Jennie S. Clough	500	
Lowell	Melinda Gates	700	45
	Margaret L. Voorhees	500	
Riverside	Edith L. Lesley	600	65
	Olive M. Lesley	500	
Shaw	Harriette E. Ryan	700	70
	Leonice S. Morse	500	

Tabular View — Concluded.

Names of Schools		Teachers	Salaries	No. of Pupils Dec. 31, 1899
Kindergartens	Sleeper	Mabel S. Adams	$700	56
		Julia L. Frame	500	
	Taylor	Mary F. Leland	700	60
		Marion F. Weston	500	
	Wellington	Gertrude M. Gove	700	52
		Florence Rice	450	
	Willard	Ellen A. Watson	700	58
		Alice V. McIntire	500	

Teachers of Sewing	Agnes Gordon	$600
	Alice H. Nay	600
	Nancy T. Dawe	540
Director of Music	Frederick Elmer Chapman	2,000
Director of Drawing	Peter Roos	1,800
Assistant in Drawing	Lucia N. Jennison	800
Director of Nature Study	Sarah E. Brassill	1,000
Director of Physical Training	Sara Eleanor Boudren	850
Superintendent	Francis Cogswell	3,500
Supervisor of Primary Schools	Mary A. Lewis	1,200
Agent	Sanford B. Hubbard	2,100
Clerks	Althea B. Frost	750
	Myrta E. Smith	600
Porter	John Lemon	600
Truant Officers	Lucian S. Cabot	1,000
	John Carmichael	1,000
	Jeremiah Murphy	900
	William H. Porter	1,000

SUMMARY.

Number of pupils in Latin School	414
Number of pupils in English High School	546
Number of pupils in Manual Training School	199
Number of pupils in Grammar Schools	6,528
Number of pupils in Primary Schools	5,745
Number of pupils in Kindergartens	668
Total	14,100
Number of pupils belonging to the public schools, December 31, 1898	13,786
Increase of pupils, 1899	314
Increase of pupils, 1898	476
Increase of pupils, 1897	422
Increase of pupils, 1896	714
Increase of pupils, 1895	250
Increase of pupils, 1894	278
Increase of pupils, 1893	135
Increase of pupils, 1892	210
Increase of pupils, 1891	222
Average annual increase of pupils from 1885 to 1895 (inclusive)	291

COST OF INSTRUCTION.

Latin School	$19,318 68	For each pupil	$46 67
English High School	23,750 51	" " "	43 50
Manual Training School	14,666 24	" " "	73 70
Training School (Teachers)	14,403 38	" " "	19 28
Grammar Schools	116,123 35	" " "	19 03
Primary Schools	83,231 10	" " "	15 34
Kindergartens	13,292 11	" " "	19 90
Teachers of Sewing	1,644 00		
Director of Music	2,000 00		
Directors of Drawing	2,600 00		
Director of Nature Study	1,000 00		
Director of Physical Training	635 00		
Substitute Teachers	1,191 50		
Superintendent	3,150 00		
Supervisor of Primary Schools	1,130 00		
Agent	2,044 00		
Clerks	1,245 00		
Truant Officers	3,790 00		
Porter	530 00		
	$305,744 87	For each pupil	21 68

Cost of instruction in Evening High School	$1,499 00
Cost of instruction in Evening Elementary Schools	2,570 00
Cost of instruction in Evening Drawing Schools	*1,206 00
	$5,275 00

THE POST OFFICE ADDRESSES OF THE SEVERAL SCHOOLS ARE AS FOLLOWS:

CAMBRIDGE — Latin, English High, Rindge Manual Training, † Agassiz, † Peabody, † Russell, ‡ Washington, ¶ Corlett, Cushing, Dunster, Holmes, Lowell, Riverside
CAMBRIDGEPORT — † Allston, ‡ Fayette Street, ‡ Harvard, † Morse, ‡ Roberts, ‡ Webster, † Wellington, Boardman, Dana, Felton, Gannett, Parker, Sargent, ¶ Shaw, Stearns, Tarbell, Willard.
EAST CAMBRIDGE — ‡ Putnam † Taylor, ‡ Thorndike, Gore, Lassell, Otis.
NORTH CAMBRIDGE — ‡ Ellis, † Shepard, † Sleeper, Reed, Wyman.

REMARKS ON THE STATISTICS.

The increase over the last school year in the number of pupils registered is 727; in the average number belonging, 348; in the average daily attendance, 307. In the per cent of attendance there has been a decrease of two-tenths of one per cent. The number belonging to the schools in December, 1898, was 13,786; in December, 1899, 14,100; an increase of 314. The entire cost of the day schools, which includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, and the care and repair of schoolhouses, exceeds that of last

* The director of drawing is principal of these schools. No part of his salary is included in this amount.
† Grammar and primary grades.
‡ Grammar grades.
¶ Kindergartens.

year by $44,349.33, and the cost per pupil by $2.64. In the entire cost of instruction the increase is $37,561.90, an increase in the cost per pupil of $2.28.

For several years the cost of the Cambridge schools has been compared with that of the schools in the other cities and towns of the state. The data upon which this comparison has been made has been taken from the annual report of the secretary of the Board of Education. Were this comparison continued for the year 1899, the results would be of no practical value, as during the year the cost of the schools has been materially increased, while the additional cost will not be included in the tables of the secretary of the Board of Education until the year 1900.

The increase in the cost of the schools for 1899 is principally due to the maintenance of the manual training school, to an increase in salaries, to the care of four new schoolhouses, and to the purchase of supplies to make good the loss sustained by the burning of the Harvard schoolhouse.

TEXT-BOOKS AND SUPPLIES.

At the meeting of the Board in December, the committee on supplies submitted a detailed report of the expenditures of that committee for the year. The report is as follows: —

In accordance with Section 30 of the Rules of the School Board, the Committee on Supplies submit their report for the school year ending July 1, 1899, it being their fifteenth annual report.

Stock on hand July 1, 1898	$6,197 53	
Purchases and expenditures to July 1, 1899	16,765 24	
		$22,962 77
Cash sales and exchanges	$363 47	
Delivered to schools, officers, etc.	17,293 60	
		17,657 07
Stock on hand July 1, 1899		$5,305 70

The purchases and expenditures have been: —

For text-books	$7,230 87	
Desk and reference books	506 84	
Copy books	796 55	
Apparatus and furnishings	1,503 51	
Printing, $178.00; expressage and labor, $281.97	459 97	
Repairing books, $368.31; diplomas, $168.14	536 45	
Tuning pianos	22 75	
Miscellaneous supplies, etc.	5,527 91	
		$16,584 85
Less the value of exchanges		224 44
		$16,360 41

The net cost of text-books and supplies is as follows: —

Stock on hand July 1, 1898	$6,197 53	
Bills paid by City Treasurer	16,360 41	
		$22,557 94
Less stock on hand July 1, 1899	$5,305 70	
Cash paid to City Treasurer, sales and damages	363 47	
		5,669 17
We have, net cost of all schools and officers		$16,888 77

or an average cost per pupil of $1.225. The average cost per pupil per annum for fifteen years has been $1.226.

The annual cost per pupil for text-books and supplies since the introduction of the free text-book law is as follows: —

Year	Average cost per pupil	Year	Average cost per pupil	Year	Average cost per pupil
1885	$1.880	1890	$1.334	1895	$1.152
1886	1.170	1891	1.248	1896	1.436
1887	1.051	1892	1.149	1897	1.094
1888	1.068	1893	1.109	1898	1.268
1889	0.960	1894	1.243	1899	1.235

The cost of each grade of schools for text-books and supplies is as follows: —

	Net Expense	Average per Pupil				
		1899	1898	1897	1896	1895
High Schools	$4,104 68	$3.668	$3 555	$3.398	$3.403	$2.925
Grammar Schools	6,658 89	1.476	.977	1 053	1.527	1 418
Mixed Schools	3,156 44	1.001	1.532	1.105	1.995	1.083
Primary Schools	1,870 42	.425	540	.420	.444	.325
Kindergartens	183 03	.303	1.003	.634	.580	.251
Evening Schools	368 08	....	....	....	....	....
Special Teachers	80 97	....	....	....	....	....
Officers of Board	192 48	....	....	....	....	....
Miscellaneous expenses (not chargeable to any grade)	289 09					
	$16,904 08					
Less profits on sales	15 31	....	....	....	....	....
	$16,888 77	$1.225	$1.268	$1.094	$1.436	$1.152

The total expenditure for text-books and supplies delivered to the schools has exceeded that of the previous year by $7.55, while the average

cost per pupil has decreased $0.043, so that the average for this year is lower by one mill than that for the fifteen years during which text-books have been furnished by the city. It must be remembered that since January 1, 1899, the Rindge manual training school has been maintained, and that the fire at the Harvard school in March caused a loss of at least $1,500 in text-books and supplies.

The purchases are less by $3,499.95 than last year, and the only increase in single items appears in copy books and repairs to books, for the former of which the Harvard fire was the direct cause. The Latin school shows a decrease in cost per pupil of $0.349, notwithstanding that a much larger sum than usual was spent for apparatus for physics. The English high school shows an increase in the cost for each pupil of $0.353, which is principally due to the fact that the cost of the Rindge manual training school for the last half of the year was included in the charges to the former school. The statistics of the cost per pupil in the graded schools and kindergartens are of little value for comparison, owing to the varying conditions each year, for instance, the opening or fitting up a new school or kindergarten.

While the city council made considerable reductions in the estimates submitted last year, nothing was added later to make good the unforeseen expense occasioned by the fire, a loss which would have been reimbursed to a private owner probably by the insurance. For this reason the committee were unable to buy this year much that they had expected to provide for the schools, especially the new ones, and as these purchases should not be deferred longer the estimate for 1899–1900 cannot be reduced as they had hoped. The advance in the price of paper, both white and manila, which is the largest item in miscellaneous supplies, will doubtless increase the expense of this year.

On November 1, 1899, the number of pupils in the public schools was 14,070; the average annual increase during the last five years has been 430, so that 14,500 pupils must be provided for during part of the financial year, which at the average cost of $1.226 would require an appropriation of $17,777 for regular supplies. It will cost $1,500 for the maps, charts, and apparatus to complete the equipment of the Latin, Allston, Ellis, Harvard, Peabody, and Roberts schools; the five pianos needed for these grammar schools should cost not less than $200 each. For the expense of maintaining the Rindge manual training school and repairing and replacing machinery as it wears out, $1,500 is estimated.

The committee therefore recommend that $21,777 be requested for text-books and supplies for the current financial year.

This committee has spent $287.97 for flags and flagstaffs during the year ending December 1, 1899, of which $57.97 was for putting up two

poles which were ordered the previous year but set up too late to be paid for before it ended. They estimate that $250 will be required this year.

CHANGES IN TEXT-BOOKS.

The following is the rule relating to changes in text-books: — All proposals for changes in text-books shall be made to the superintendent. If believed by him to deserve consideration, he shall appoint two persons, one of whom shall be a teacher in the service of the city, and they and the superintendent shall examine and each make a written report on the proposed books. These reports shall be kept on file in the office of the superintendent, and shall be open to inspection by members of the Board only. Changes so considered may be recommended to the Board for adoption, when they shall be referred to the committee on text-books.

The committee on text-books for the year 1899 respectfully report that the following changes in text-books have been considered by this committee and adopted by the Board: —

For use in the high schools, Chardenal's Complete French Course, Merrimee's Colomba, Rogers's French Sight Reading, Bernhardt's Auf der Sonnenseite, Brandt's German Reader, Mondan's German Selections for Sight Translation, Botsford's History of Greece, Lewis's First Book in Writing English, in place of Chittenden's English Composition, and Schwartz's Office Routine and Bookkeeping.

Corneille's Le Cid and Racine's Athalie were adopted for use in the Latin school.

LeRoy's First Book in French was adopted for use in the Rindge manual training school.

New Introductive Bookkeeping, published by Williams & Rogers, was adopted for use in the evening high school.

For use in the grammar schools the following books have been adopted: Hornbrook's Concrete Geometry, Baldwin's Fifty Famous Stories Retold, Carpenter's Geographical Reader, Eggleston's Stories of Great Americans for Little Americans, and Montgomery's Leading Facts of American History. This last named book is for use in the ninth grade and takes the place of Thomas's History of the United States.

The courses of study in the Latin school and in the English high school have been revised. That for the former with a view to a more equitable distribution of the work preparatory to the college examinations, that of the latter by the addition of a course in domestic science and a revision of the commercial course which is enlarged and extended from two to four years.

SCHOOL ACCOMMODATIONS.

The following is from the report of the committee on schoolhouses: —

The year just past has been one in which more has been done than usual to accommodate our constantly increasing schools.

The Latin schoolhouse was completed and occupied in April. It contains fifteen classrooms, nine recitation rooms, laboratories for chemistry and physics, an assembly hall, lecture rooms, library, hospital rooms, offices, drawing-rooms, a lunch room, and a gymnasium, all equipped, except the gymnasium, in the best manner. The building cost $250,000, the land $45,000, and the furnishing $23,659.

The Roberts schoolhouse was completed and occupied in June. It contains twelve classrooms and a hall, with the necessary teachers' rooms, recitation rooms, and dressing rooms. The building cost $47,146, the land $12,000, and the furnishing $2,928.

The Ellis schoolhouse, also containing twelve classrooms and a hall, and all needed accommodations, was completed and occupied in September. This schoolhouse cost $48,000, the land $6,200, and the furnishing $2,873.

The Peabody schoolhouse, having formerly six rooms, only one wing of the original plan having been built, has been completed, and was occupied in April. This schoolhouse contains fourteen rooms and a hall, and is undoubtedly in its arrangements and appointments the best grammar school building in the city. The addition cost $42,000, and the furnishing $2,253.

On the morning of March 21 the Harvard schoolhouse was so damaged by fire that it was found necessary to rebuild it, all but the walls of the two lower stories being removed. The building is to be somewhat enlarged. There has been expended on it so far $23,765. Meanwhile the Harvard school occupies the building on Fayette street and the one on Lee street, the buildings vacated by the Latin school directly after the fire, and there are two classes of the ninth grade in the new Latin schoolhouse.

Notwithstanding all these additions, we have no rooms unoccupied in Wards Two, Three, or Four, though there will be ten rooms available in the Fayette street building in Ward Two when the Harvard school returns to its home. There are six unoccupied rooms in Ward One — two in the Holmes, one in the Russell, and three in the Peadody; and six in Ward Five — one in the Sleeper, and five in the Shepard. The Quincy schoolhouse has been vacated and sold for $25,000. The pupils now occupy the Holmes schoolhouse.

The Otis schoolhouse has been remodelled, and was occupied late in October. The cost was about $8,000.

The Smead system of heating and ventilation has been removed from the Morse and Putnam schoolhouses, and a different system substituted at a cost of $16,770 in the Morse, and $16,403 in the Putnam.

In compliance with an order adopted by the Board in June, the sanitary condition of the older schoolhouses has been greatly improved, $13,913 having been expended in replacing defective or worn-out plumbing.

The Felton building, a substantial brick structure, should be remodelled, as has been suggested in several previous reports, and the rooms so arranged as to utilize the space, which is ample for four good rooms.

During the coming year a building for the Washington school should be built somewhere east of Harvard Square, on or near Remington street, which will accommodate the pupils of the Washington district and also relieve the Webster school, which is now crowded. There is also need of additional room in the vicinity of the Cambridge Field. For this purpose the Gannett schoolhouse could be moved and enlarged, but the location is not a desirable one.

SERVICE ENDED — COMMITTEE — TEACHERS.

Mr. Joseph J. Kelley entered upon his duties as a member of the school committee, January 6, 1898. Mr. Kelley was a prominent citizen of Ward Three, East Cambridge. The special committee appointed to attend his funeral and prepare resolutions on his death submitted the following report: —

By the death of Joseph J. Kelley, the school committee, for the first time in many years, has lost one of its members during his term of service. Although not born in this city he lived here since early childhood and was educated in our public schools. He served the city and state in many responsible and honorable positions, as common councilman, alderman, a trustee of the Cambridge public library and representative to the general court. In 1897 he was elected to the school board. It is fitting that we, his colleagues on this Board, should give public expression to our deep regret for the loss sustained and our high appreciation of his honesty of purpose and character.

We recognize his services to the public, not alone as a member of the school board, but in the varied positions in which he served our city and state, always on the side of right, temperance and honesty.

His integrity and good intentions in public and private life were recognized by all who knew him, and his kindly nature made his personality attractive even to strangers.

He, himself, being a product of our public school system, was always its staunch friend and defender, ever acknowledging his indebtedness to it for what of public and intelligent life he had lived.

Taken from school at the age of fourteen, he had, nevertheless, been well grounded in essentials, having been given an appetite for good reading and good books; he did much in mature life to overcome the lack of extended school training, and by his extensive reading of the best literature of our language, he became a man of intelligence and fond of the companionship of good books. We shall miss his cheery, honest countenance, and we recognize in the death of Joseph J. Kelley a public loss.

Miss Maria E. Spare taught in the Putnam grammar school from June 9, 1862, to April 22, 1885. She was then transferred to the high school. When the classical and English departments of that school were made two separate schools, she was assigned to the English high school.

Miss Helen I. Hutchison was principal of the Riverside kindergarten from September 1, 1889, to February 18, 1899. She was a teacher in one of Miss Shaw's kindergartens before they became a part of the public school system.

Miss Mary F. Emerson became a teacher in Cambridge in 1860. She taught in primary schools until 1874, when she was transferred to the Harvard grammar school. She resigned December 1, 1899.

Mr. Benjamin W. Roberts taught in Cambridge in the same school over fifty years. He was born July 27, 1816, and was therefore in his eighty-fourth year. He continued in school doing his accustomed work until a week before his death.

For an account of his long connection with the schools see the report for 1898.

In Memoriam

Joseph J. Kelley
April 28, 1899

Maria E. Spare
April 12, 1898

Helen I. Hutchison
March 24, 1899

Mary F. Emerson
December 24, 1899

Benjamin W. Roberts
January 24, 1900

PLAN OF THE SCHOOL REPORT.

For many years the subject matter and arrangement of the statistical part of the school reports have remained essentially unchanged; and for the past few years each report has contained certain definite information relating to the organization and conduct of the schools such as is frequently sought by parents or persons interested in school affairs. The same general plan has been followed in preparing this report.

Latin School. March 1, 1886, the Classical and English departments of the Cambridge high school were made two separate schools, called respectively "The Cambridge Latin School" and "The Cambridge English High School."

The following table shows the membership of the Latin school and the cost of instruction from year to year, beginning with the year 1890: —

December	Number of Pupils	Number of Teachers	Cost of Instruction	Cost per Pupil	Number of Graduates
1890.....	227	10	$12,607 41	55 54	17
1891.....	230	10	12,967 50	56 38	36
1892.....	262	10	12,751 07	48 66	22
1893.....	311	11	13,425 66	43 17	23
1894.....	368	12	14,359 66	39 02	27
1895.....	388	14	15,059 58	38 81	25
1896..... ..	371	15	16,525 00	44 54	34
1897.....	373	16	17,335 00	46 47	35
1898.....	383	16	18,325 00	47 84	43
1899.....	414	19	19,318 68	46 67	43

The cost of the Latin school to the city is less than the above sum by the amount received from the Hopkins fund, which can be used only for classical instruction. Were this amount deducted, the annual cost per pupil would be from two to three dollars less than given above, according to the number of pupils in the school.

The course of study is arranged for five years, and for four years, and is almost wholly decided by the requirements for admission to Harvard College. Fourteen per cent of all the graduates have completed the work in four years. The following is the rule relating to the admission of pupils to the high schools: —

"Pupils who have received the diploma of a grammar school may, on recommendation of the master, be admitted to either high school without an examination. For other persons who desire admission, an examination shall be held at the beginning of the autumn term under the direction of the superintendent, but pupils who are qualified to join existing classes may be admitted at any time on application to the principal. No pupil

from any grade in a grammar school shall be examined who does not present a satisfactory certificate that he has pursued his studies during the summer vacation."

For several years pupils who have received the diploma of graduation have not been admitted except on the recommendation of the principal of the school to which they respectively belong, or on an examination after additional study during the summer vacation. From two-thirds to three-fourths of the pupils are usually recommended for admission without an examination. About one-half of the remaining part do not seek admission.

Diplomas of graduation signed by the mayor and the head master of the school are awarded to pupils of the high schools who have successfully completed the course of study or its full equivalent and have sustained a good character.

For non-resident pupils the tuition is fifty dollars a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

For six years after its organization the Latin school occupied a building provided for it on Lee street. In September, 1892, it moved to the high school building on Fayette street. April 10, 1899, it moved into its new building near the English high school and the public library. A description of this building is given in another part of this report.

English High School. The English high school was organized March 1, 1886.

The following table shows the membership of the English high school and the cost of instruction from year to year, beginning with the year 1890. Until January 1, 1899, the pupils of the Rindge manual training school were included in the membership of the English high school. This explains the decrease in the number of pupils for the year 1899:—

December	Number of Pupils	Number of Teachers	Cost of Instruction	Cost per Pupil	Number of Graduates
1890.....	518	15	$17,962 50	$34 68	37
1891.....	575	16	18,767 50	32 64	48
1892.....	613	19	20,488 50	33 42	77
1893.....	656	19	22,095 00	33 68	95
1894.....	709	21	23,051 00	32 51	91
1895.....	674	21	24,369 40	36 16	89
1896.....	679	21	24,612 00	36 25	72
1897.....	730	23	25,194 09	34 51	90
1898.....	736	23	26,051 17	35 40	97
1899.....	546	23	23,750 51	43 50	59

There are four courses of study, — a general course; a course preparatory for the scientific schools; a commercial course, and a domestic science course, each arranged for four years.

It is the plan of the courses that all pupils in the school shall pursue substantially the same subjects for their first year, but thereafter shall have increasingly divergent studies, open to choice within reasonable limitations and determined largely by aptitude and expectation of subsequent career.

These general statements apply to all the courses: —

1. All pupils will have a weekly exercise in music (choral singing).

2. Drawing is required of all once a week for the first year, and is open to all as an extra subject during the remaining three years.

3. It is expected that no two foreign languages will be begun the same year; that any foreign language once begun will ordinarily be continued for two years, and that a modern foreign language will not be continued longer than two years, except by work in conversation.

4. Variations from the courses as stated are permissible with the approval of the head master.

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils the tuition is fifty dollars a year, payable in advance, — one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

Rindge Manual Training School. This school was founded by Mr. Frederick H. Rindge in 1888. For ten years he paid the current expenses of the manual training department, the city providing for the academic instruction. January 1, 1899, a complete transfer of the entire plant was made to the city, and the school became an integral part of the school system. The statistics of the school for the year 1899 are as follows: Number of pupils, one hundred ninety-nine; number of teachers, fourteen; cost of instruction for eleven months, fourteen thousand six hundred sixty-six dollars twenty-four cents; cost per pupil for eleven months, seventy-three dollars seventy cents.

The course of instruction covers four years. The sessions are six hours a day instead of five, as in the other high schools. About one-third of the time is given to the work of manual training, and the remainder to the subjects usually taught in high schools, with the exception of Latin, Greek, and German.

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils the tuition is one hundred fifty dollars a year, payable in advance. — one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 2.30 P. M. The following is from the report of the committee on high schools : —

The Rindge manual training school has been this year for the first time under the complete charge of the school committee. No changes, however, have been made in the course of study or in the methods of administration, and no changes of any importance in the force of teachers. The school continues to do the excellent work which it has done in years past, and the citizens of Cambridge have every reason to be satisfied with its past record and present prospects.

One change of importance, however, has been made in the administration of the school. The manual training school was formerly, so far as its academic work was concerned, a part of the English high school. It has now been made an independent school, its head master being solely responsible for all of its work and reporting directly to the high school committee. We believe that this change works to advantage in both schools.

In the Latin school some important changes have gone into effect during the current year. A new course of study, designed to meet the new requirements for admission to Harvard College, and also to meet the needs of candidates for other colleges, as well as of pupils intending to secure a general education, went into effect at the opening of the present school year. Under that course of study two important options are allowed. In languages, an option is allowed between Greek and a modern language, — French or German. In the sciences, an option is allowed between physics and chemistry. Formerly physics alone could be taken ; but the excellent equipment of the new building for chemistry, and the attainments of Mr. Phinney, who is now in charge of these subjects, make it possible to offer an option in chemistry. The result of these new options was that of eighty-one scholars, fifty-three chose Greek, eighteen German, and ten French, and of seventy-two scholars, fifty-four chose chemistry, and eighteen physics. It will be seen that in the languages a large number feel disposed to adhere to the old study ; while in the sciences the new study, chemistry, proved greatly more attractive than the old study, physics.

Four new teachers began work in the Latin school at the opening of this year. One of these was needed because of the absence for a year

of Miss Helen M. Albee, by permission of the committee. The other three were needed by the increase in numbers and by the addition of options. All are doing good service.

The Latin school moved into its beautiful new building in April, 1899, being compelled to shift suddenly because of the burning of the Harvard school. Its transfer was made with ease and carefulness, giving proof of the good organization and discipline of the school. On the first day in the new building every pupil was in his seat at the appointed hour.

In the English high school even more important changes in the course of study have been made. The regular course has been remodelled by the addition of a considerable range of options. Further, the commercial course, which previously had extended over two years only, has been enlarged and strengthened, so that like the other course it shall extend over four years. An entirely new course has been added, a domestic science course for girls, corresponding to the commercial course for boys, and offering training in sloyd (wood-working), cooking, and household chemistry, and similar subjects. The general plan upon which all these new options are offered is that the work of pupils in their first year shall be substantially alike, and that in the second year the difference between the work of the several classes shall not be considerable. In the third and fourth years it is supposed that the aptitudes of pupils will have become known, and that their own tastes and intentions will have more fully developed; and that they will then turn to whatever course of study may prove best adapted for their future careers. In all cases the work in English has been made continuous throughout the course. Additional opportunities have been given also for the study of history, which may now be pursued through the four years.

All of these changes are not as yet in full effect. The last year of the commercial course has not as yet been entered upon by any class, and the same is true of the last year of the domestic science course.

Some arrangement for the successful conduct of these courses in their last year still needs to be made. The transition to the new arrangement from the old has not been fully carried out in other particulars, and for the present there are some classes and divisions which will probably be dispensed with as the new system is fully completed.

It should be noticed that the general effect of the new arrangements in the English high school is to leave the entering pupil free to make choice as to his or her future work. The pupil may take the literary course in the high school, or, if attracted by such work toward further study, may without serious difficulty re-adjust the later studies in such a way as eventually to enter a college. Preparation for scientific schools

has always been undertaken by the English high school and is still continued. To those who may decide after the first year or two to take the commercial course or the domestic science course, new opportunities are offered.

The teaching force of the high school has been changed by the engagement of three new teachers, two of whom, however, give only three-fifths of their time to the school. The work of all is satisfactory. The new arrangement of studies has called for some additional classes, so that, notwithstanding the additions to the force, the work of the teachers has not been appreciably lightened. We beg to call the attention of the school committee to the following memorandum submitted by the head master of the high school: "The policy of the school is to supplement the class work by personal effort with the pupils who need it, so far as this can be done without undue strain upon teacher and pupil. To this end arrangements are made by which teachers of ordinary subjects may have when it is possible one school period a day free from recitation, and teachers in charge of laboratory work somewhat more free time. This has not been possible in the case of all our teachers. There are four who have no free period, and one who has such a period only every other day. In the case of two of these the strain of school work, including the looking after pupils who fall behind, seems to me to have affected health unfavorably."

In conclusion, the committee have great pleasure in calling attention to a number of gifts which the high schools received during the year. Messrs. Edwin A. and Stanley B. Hildreth have placed in the hands of the head master of the Latin school the sum of $500, to be used at his discretion in the purchase of books and statuary. The English high school has received gifts as follows: From the editors of the *Latin and High School Review*, a cast of the bust of Daniel Webster; from the class of 1899 on graduation, a collection of volumes, chiefly historical novels, bearing on American history; from Professor Albert Bushnell Hart, nine volumes, which, with other previous gifts, make five sets of his "American History told by Contemporaries"; and from the Hon. George F. Hoar, senator from Massachusetts, a set of the messages and papers of the presidents, in ten large octavo volumes. All these evidences of interest and appreciation are valued by the committee and will be grateful to the citizens of Cambridge.

Manual Training in Other Schools. The statutes require that every town and city of twenty thousand or more inhabitants shall maintain, as part both of its elementary and its high school system, the teaching of manual training. The Rindge manual training school gives the required

instruction to boys of the high school grade, and provision is made in the English high school for girls of this grade, sloyd being taught in the second year and cooking in the third. Sewing in the grammar schools may be considered as meeting the requirements for girls in the grammar grades. It now remains to provide for the boys. A beginning has been made in the Allston school. Instruction in sloyd is given to the boys of this school, to a class of twenty boys from the Roberts school, and to another from the Wellington. This work should be extended until all the boys in the grammar schools who desire to receive instruction in manual training shall have an opportunity. That the work may be arranged and carried forward in a systematic manner, it should be under the direction of one person, as is the case in music and drawing. The head master of the manual training school would seem to be the appropriate person to direct and supervise this work.

Wellington (Training) School. This school was opened in September, 1884, and differs from the other schools in this respect, — all the grades, except the eighth and ninth, are taught by young teachers. Their work, however, is done under the immediate supervision of a master and three assistants, who are held responsible for the instruction and management of the school. For several years the seventh grade has been taught by a graduate of the training class.

The object of conducting a school on this plan is to give the Cambridge young women who desire to teach, and who have made special preparation for the work, an opportunity to gain experience under conditions favorable to their own success, and without prejudice to the interest of their pupils.

Graduates of the English high school or of the Latin school, who have also graduated from one of our state normal schools or from the Boston normal school, are preferred candidates for the position of teacher in this school. Other persons of equal preparation may be appointed.

The required term of service is one year, but teachers are at first appointed for three months on probation, and may be excused or dismissed at any time by the superintendent, with the approval of the committee on the training school.

That the direct influence of the school may be continued for a longer period than one year, it is the duty of the master, or of one of the supervising teachers, occasionally to visit the schools of the graduates who are teaching in Cambridge.

The money compensation for the first three months, and until satisfactory service is rendered, is at the rate of two hundred dollars a year.

For the remaining part of the year it is at the rate of two hundred fifty dollars. Teachers employed after the required term of service are paid at the rate of three hundred dollars.

The school contains all the grades of the grammar and primary schools and a kindergarten, the number of pupils being about eight hundred.

By the rules of the school board the superintendent is authorized to employ as many substitutes and temporary teachers as may be necessary to take the places of absent teachers. These teachers are usually assigned to the training school, when not otherwise employed, that there may be at this school a sufficient number of teachers to make it practicable for the members of the training class to visit other schools. The following is from the report of the committee on the training school: —

During the year twenty-two teachers have been admitted to the training class, and six have withdrawn because of unsuccessful work. Eighteen graduates have received appointments to permanent positions in the schools of Cambridge, and two have received similar appointments in the schools of Boston.

The Wellington school opened in September with six hundred fifty pupils, between three and four hundred having been transferred to the Allston school. The transfer of these pupils relieved the crowded condition of the school, and made it possible for the committee to carry out their long delayed plans in regard to the establishment of a kindergarten. It has seemed especially desirable that a school for the training of teachers should contain a kindergarten. No teacher can plan wisely and work to the best advantage who does not take into account what the child has already done and what he is expected to do. It is therefore important that primary teachers understand the work, and especially the spirit of the work, in the kindergarten. It is also equally important that the kindergartner become familiar with the work in the primary schools.

It is hoped that in the near future the old wooden schoolhouse will be replaced by a brick building large enough to accommodate all the primary classes and the kindergarten.

It is with regret that the committee record the withdrawal of Mrs. Elizabeth Q. Bolles from the Board and from this committee. During her service of four years she has been chairman of the training school committee, and her efficient, faithful work has been of great value to the school.

Grammar Schools. The number of pupils in these schools on the first of December was six thousand five hundred twenty-eight; and the number of teachers, including masters and special teachers, was one hundred seventy.

The cost of instruction for each pupil for the year has been nineteen dollars three cents. This does not include the cost of supervision.

For non-resident pupils the tuition is twenty dollars a year, payable in advance, — one-half at the beginning and the other half at the middle of the school year.

The course of study is for six years, but the schools are so classified as to give the pupils an opportunity to complete the course in four years or in five years. The average age of the pupils who entered last September was nine years ten months. The number of graduates was five hundred fifty-three, their average age being fifteen years. Of these, six per cent completed the course of study in four years, thirty-one per cent in five years, forty-seven per cent in six years, and sixteen per cent in seven or more years.

Pupils are promoted by classes from the primary schools at the beginning of the autumn term; but individual pupils may be promoted at other times, if it is deemed expedient by the supervisor of primary schools and the superintendent.

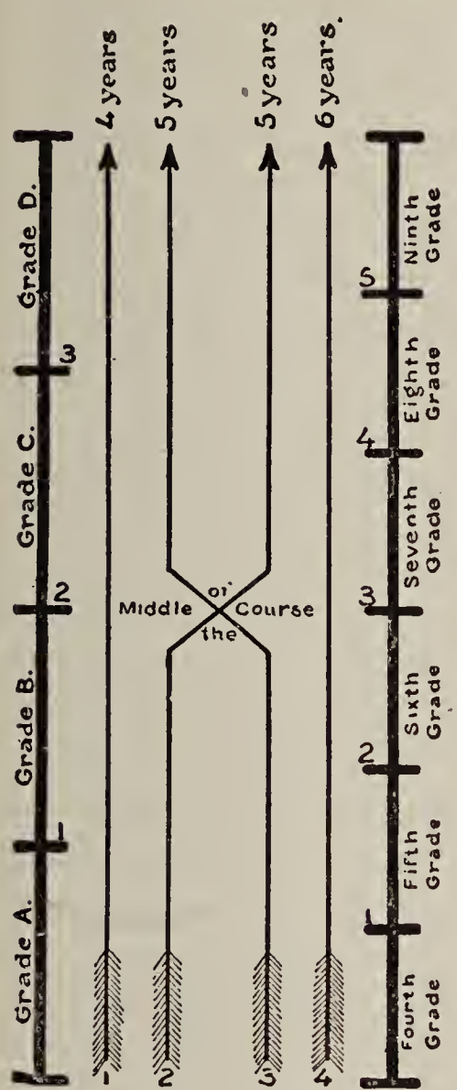
Promotions from grade to grade in the grammar schools, and from the grammar to the high schools, are made by the teachers under the direction of the masters and the superintendent. Pupils qualified to join existing classes may be admitted at any time on application to the master of the school. No regular preannounced examinations are held in these schools, but the results of such written exercises and reviews as the teachers and masters may hold from time to time may be used as a part of the basis of promotion.

The thoroughness with which the work is done in any school is shown in part by the ability of the pupils to do the work in the high schools. The pupils are admitted to the high schools on trial; and by the rule of the high school committee, any pupil who fails to maintain a suitable rank is reported to that committee, and no pupil thus reported can continue in either high school except by special vote. This year provision has been made by which these pupils will remain in the English high school, and receive such instruction as will best fit them to enter again upon the regular work of the school at its reorganization in September.

In the grammar schools special teachers are appointed to help such pupils as seem able to do the work in less than six years, and to aid those who without personal instruction would require more than six years. This action of the committee removes the most serious objection to the graded system of schools.

The course of study is divided in two ways: (1) into six sections; (2) into four sections; each section covering a year's work. Pupils taking

the course in six years are classified in six grades, called the fourth, fifth, sixth, seventh, eighth, and ninth grades. Those taking it in four years are classified in four grades, called grades A, B, C, and D. When pupils are promoted to the grammar schools they begin the first year's work together. After two or three months they are separated into two divisions.



One division advances more rapidly than the other, and during the year completes one-fourth of the whole course of study. The other division completes one sixth of the course.

During the second year the pupils in grade B are in the same room with the sixth grade. At the beginning of the year they are five months (one-half the school year) behind those in the sixth grade. After two or three months grade B is able to recite with the sixth grade, and at the end of the year both divisions have completed one-half the course of study — the one in two years, and the other in three years. The plan for the last half of the course is the same as for the first half, the grades being known as the seventh, eighth, and ninth in the one case, and as C and D in the other.

There are also two ways of completing the course in five years: (1) any pupil who has completed one-half the course in two years, may at the end of that time be transferred to the seventh grade, and finish the course in three years; (2) any pupil who has completed one-half the course in three years, may at the end of that time be transferred to grade C, and finish the course in two years. In both cases these changes can be made without omitting or repeating any part of the course.

It is now eight years since the schools were first classified on this plan. During this time four thousand one hundred thirty-six pupils have graduated from the grammar schools. Of this number, 8 per cent completed the course in four years, 30 per cent in five years, 47 per cent in six years, and 15 per cent in seven years or more.

Of the number who entered the Latin school during the past five years, 17.0 per cent did the work in the grammar schools in four years, 44.3 per cent in five years, and 38.7 per cent in six years. Of those who

Arrow No. 1 indicates the four years' course; grades A, B, C, D. Arrow No. 2 indicates one of the five years' courses; grades A, B, 7, 8, 9. Arrow No. 3 indicates the other 5 years' course; grades 4, 5, 6, C, D. Arrow No. 4 indicates the 6 years' course; grades 4, 5, 6, 7, 8, 9.

took the general course in the English High School, 12.3 per cent did the work in the grammar schools in four years, 43.4 per cent in five years, and 44.3 per cent in six years. Of those who took the commercial course in the English high school, 10.1 per cent did the work in the grammar schools in four years, 38.5 per cent in five years, and 51.4 per cent in six years. Of those who entered the Rindge manual training school, 7.4 per cent did the work in the grammar schools in four years, 38.9 per cent in five years, and 53.7 per cent in six years.

More than 50 per cent of the pupils entering the high schools did the work in the grammar schools in less than six years, 43 per cent doing it in five years, and 12 per cent in four years. It does not follow, however, that because so many did the work in less than the full time, the plan is a good one. The value of the plan is shown rather by the thoroughness with which the work has been done, not in one year only, but in a series of years. The results of the first year's work in the high schools would seem to be a test of this thoroughness. The records in these schools show that every year for five years the average per cent of the pupils who were four years in the grammar schools was higher than the per cent of those who were five years in the grammar schools, and that the per cent of those who were five years in the grammar schools was higher than the per cent of those who were six years in the grammar schools.

The average per cents of the first year's work in the different high schools for five years are as follows: —

In the Latin school, the average per cent of the pupils who completed their grammar school work in four years is 79.0; of those who completed it in five years, 74.3; of those who completed it in six years, 68.7.

In the general course of the English high school, the average per cent of the pupils who completed the grammar school work in four years is 78.5; of those who completed it in five years, 76.0; of those who completed it in six years, 73.4.

In the commercial course of the English high school, the average per cent of the pupils who completed the grammar school work in four years is 74.0; of those who completed it in five years, 71.1; of those who completed it in six years, 69.2.

In the Rindge manual training school, the average per cent of the pupils who completed the grammar school work in four years is 76.3; of those who completed it in five years, 66.6; of those who completed it in six years, 66.3.

These results do not indicate as thorough preparation for high school work as is desirable, but they do show that there are some pupils who can do the same amount of work as others in less time, and do it as well and

even better. If the pupils who spent only four or five years in the grammar schools should have remained longer, it is equally true that the time should have been lengthened for those who had been in these schools six years. In every course of study provision should be made for the more rapid advancement of a part of the pupils, or for additional work for those able to do it.

Primary Schools. The number of pupils in these schools on the first of December was five thousand seven hundred forty-five; and the number of teachers was one hundred thirty-eight, being an average of forty-two pupils to a teacher.

The cost of instruction for each pupil for the year has been fifteen dollars thirty-four cents. This does not include the cost of supervision.

For non-resident pupils the tuition is fifteen dollars a year, payable in advance, — one-half at the beginning and the other half at the middle of the school year.

The course of study is for three years. Children five years old are admitted to the first grade at the beginning of the school year and during the first week in March. Pupils qualified to join existing classes may be admitted at any time on application to the principal of the school. Forty per cent of the pupils at the present time are in the first grade, thirty-three per cent in the second, and twenty-seven per cent in the third.

One thousand three hundred ninety-three pupils graduated last June, at an average age of nine years eight months. Of these, seven per cent completed the course of study in less than three years, fifty-eight per cent in three years, and thirty-five per cent in more than three years.

Promotions from grade to grade in the primary schools, and from the primary to the grammar schools, are made by the primary teachers, under the direction of the supervisor of primary schools and the superintendent. Promotions by classes are made annually at the beginning of the autumn term; but individual promotions are made at other times, if it is deemed expedient by the supervisor of primary schools and the superintendent.

Pupils are promoted to the grammar schools on trial, and those who show by their work that they are unprepared are returned to the primary schools on the approval of the supervisor of primary schools and the superintendent.

Once a month the teachers of each grade meet the directors of special studies and the supervisor of primary schools. These meetings are held in the English high school building on Wednesday afternoons, half an hour after the close of school. The work for the coming month is planned; criticisms and suggestions in regard to methods are made; and questions from the teachers are answered and discussed.

Occasionally specimens of written work from all the pupils are

brought for examination. In this way the amount of work done in the schools is made somewhat uniform; new teachers are kept informed as to the requirements; and pupils lose less time when a change of teacher or school becomes necessary.

Kindergartens. There are twelve kindergartens. The number of pupils on the first of December was six hundred sixty-eight, and the number of teachers twenty-four.

The cost of instruction the past year has been thirteen thousand two hundred ninety-two dollars eleven cents, and the cost per pupil nineteen dollars ninety cents. The following is from the report of the committee on kindergartens: —

One additional kindergarten was opened in the Wellington school building, September eleventh. Fifteen children came the first session. It now numbers fifty-two, with an average attendance of forty. Only two of the fifty-two had ever been to a kindergarten. In 1898 the number of children in the city between five and six years of age was one thousand three hundred ninety-five. It is probable that the number between three and one-half and five years would be in excess of this number. There is no doubt that over eight hundred children are still unprovided with kindergarten instruction. Pope says:

> "'Tis education forms the common mind;
> Just as the twig is bent the tree's inclined."

It appears to your committee that it is the duty of this Board to provide more kindergartens to educate and train this large number of children, many of whom are now neglected. We therefore recommend that at least two additional kindergartens be opened as soon as suitable rooms can be secured.

The supervisor of primary schools who has general supervision of the kindergartens, writes as follows: —

Mothers' meetings are now a well-established feature of all the kindergartens. The mothers and teachers come together several times during the year for consultation, or to listen to suggestions from persons interested in the welfare of the children. During the past year physicians have given talks on the care of young children; demonstration lessons have been given in the preparation of wholesome food; and teachers of normal classes have explained the principles and intention of the kindergarten. In one building the mothers and the teachers of the primary children join in the meetings.

The following, from an address by Nicholas Murray Butler of Columbia University, New York, is of special interest: —

It is sometimes said that the kindergarten is at war with the home; that these children of tender years should be under their mothers' care;

that it is unnatural for children of that age to be brought together in groups for instruction, however needful it may be. I hold the contrary opinion. I think that of all forms of educational work, none has been so successful, as yet, in reaching and uplifting the home, as the kindergarten; and the kindergarten which does not have a mothers' class attached to it is not a kindergarten in the best sense of the word.

Special Studies. Under the new rules of the Board, one of the standing committees is named a committee on special studies. It has the supervision of the instruction in nature study, drawing, music, and sewing. The following is from the report of this committee: —

There can be no question as to the ability and faithfulness of the special teachers. They are manifestly interested in their work, and probably the results are as satisfactory as can be reasonably expected, considering the very limited time necessarily allowed to these subjects. It may possibly be questioned, however, whether in their enthusiasm for their work, the special teachers are not expecting or asking a little too much of both teachers and pupils. While it is advisable to give the children some insight into the value and beauty and delights of these branches of education, it is not to be expected that they will acquire more than an elementary knowledge of these subjects — just enough to awaken an interest and desire to learn more when the right opportunity comes in future years. It was not intended when these studies were introduced to impede the progress of the scholars in arithmetic, language and other essential studies, but rather to vary and enrich the curriculum by the addition, as far as possible, of valuable but what may be considered more ornamental studies.

In view of the results in some schools, it may be wise to simplify or shorten the work in these special studies, in order that larger gains may be made in those more important.

All schools are not alike. Some, by reason of having many pupils of foreign birth or parentage, who hear French and Portuguese mostly spoken by their parents, and other pupils with few home advantages of birth and surroundings to develop their education, necessarily require more time for the study of "the three R's." Other schools, with pupils mostly from homes of refinement and social advantages, find the progress in most studies quite satisfactory; and the reports of their teachers show the harmonious and profitable course of the work.

It seems wise, therefore, and your committee would recommend, that the superintendent should have authority, with the approval of the member of this Board in charge of such school, to change the schedule of instruction in any school where it seems clearly advisable.

Such changes may be especially needed in some of the primary schools where there is danger of the pupils of the first grade being overworked at so young an age.

Nature Study. The following is from the report of the director of nature study : —

During the year the work has been carried into the grammar grades. This has called for some slight changes in the course of study. Having one more year in which to work, a greater variety of lessons is possible, giving to the pupils a broader outlook.

In the primary grades place is made for the new lessons by assigning whatever was at all difficult in the old course to the next higher grade.

In the method of work there has been no change. From the first the lessons have been simple, untechnical, and fully within the capacity of the children. The effort has been to make the children keenly alive to the nature changes going on about them, to excite an intelligent interest in those changes, and to give increasing information in regard to them.

The end sought is to form and fix right habits of seeing and thinking, and to teach such facts as will be needed in more advanced study of science which may follow.

This view of nature study in the lower grades seems to be more and more accepted as experience with children in the schoolroom provides a basis for judgment.

In our own schools growing familiarity with the subject is resulting in better work each year.

Drawing. The course of instruction in drawing in the primary and grammar grades includes form, color and designing.

The study of form, by means of type models and drawing, is begun in the first primary year, and is succeeded in the grammar grades by object drawing, drawing with instruments, and drawing from nature. The latter subject receives especial attention during the spring and autumn months.

Color is studied in all the grades, colored tablets being used in the primary grades and water colors in the grammar grades. Harmony and mixing of colors are treated as a science in special exercises; while color skill is artistically expressed in original designs, historic ornament, and nature study.

In design, attention is given both to construction and designing, embracing a large variety of subjects.

In the English high school drawing is a required study the first year, and is carried forward upon a plan of which the following is an outline : —

Drawing from objects and from casts ; drawing from nature of plant form ; drawing to scale ; designing (constructive and decorative) and color harmony.

Drawing, designing, or water color painting, may be taken as an elective study after the first year. The course of lessons includes landscape, still-life, and advanced designing.

The work of these classes is becoming more advanced each year owing to the steady progress made in the primary and the grammar schools.

In the English high school the instruction in drawing is given by the the director of drawing and his assistant. In the primary and grammar grades it is given by the teachers under the supervision of the director and his assistant.

In the Rindge manual training school there are two teachers of drawing, one of mechanical drawing, and the other of free-hand, and the work is done under their immediate instruction.

Music. Instruction in music by the National or Mason system is given by the regular teachers in the primary and grammar grades, and by the director of music in the Latin school and English high school. All the schools, excepting the Rindge manual training school, are under his supervision, and every pupil who is capable of learning to sing is required to give attention to the subject.

Twenty minutes a day in primary, and ten minutes a day in grammar grades are devoted to this study, and pupils are taught to sing and sustain their parts in reading from the simplest to the most difficult compositions in two, three, and four parts.

In the Latin school and English high school forty-five minutes a week are given to the study of musical form and expression as found in choruses, quartettes, trios, etc., from the standard operas and oratorios. Elementary harmony, elementary counterpoint and composition have been introduced as elective studies for the second and first classes.

In the Rindge manual training school a teacher of singing is employed a part of the time. He leads the singing at the morning exercises and gives regular instruction each day at that time. He also gives lessons to a glee club of twenty-five pupils who voluntarily meet out of school hours.

About forty pupils receive instruction on various instruments under the direction of the leader of the school band.

Sewing. Sewing is taught to the girls of the three lower grades of the grammar schools, and to the boys of the fourth grade who desire the instruction. Forty-five minutes are given to the work once a week in each grade. Two teachers are employed the full time, and one teacher nine-tenths of the time. Nearly all of the boys of the fourth grade are learning to sew.

Cooking. For several years cooking was taught out of school hours on Saturdays to a limited number of girls of the ninth grade. This was done at no expense to the city beyond the use of a room, heated and cared for, the Cantabrigia club having provided the necessary apparatus and instruction.

In September provision was made for a course in domestic science in

the English high school, and regular lessons in cooking are now given to the girls who elect this course. The Cantabrigia club generously gave to the city the apparatus that had been used by the classes that met on Saturdays.

Physical Training. The Ling system of physical training has been introduced into all the grades of the primary and grammar schools. Games supplementary to the gymnastic work have been introduced throughout the primary grades and the four lower grammar grades. These games are exercises in the form of play, and thus serve the double purpose of training and amusement.

Fifteen minutes are given each day to the gymnastic work. The instruction is given daily by the regular teachers under the supervision of the director of physical training, who visits each schoolroom, except the eighth and ninth grades, as often as time will allow, and who also holds meetings with the teachers.

The essential aim of the teaching is to make the gymnastic period one of healthful exercise and recreation.

Where it is practicable, as it is in the grammar grades, the discipline during the gymnastic period should be a matter of self-control on the part of the pupil, prompted by a desire for health and a comprehension of the meaning of each movement. The following is from the committee on hygiene and physical training: —

During the year a change has been necessary in the director of physical training. In April the health of Miss Cummings failed, and she was obliged to leave her work. Miss Sara E. Boudren, a teacher well prepared and experienced, was chosen to take her place, and her nomination was confirmed in October. She gives her whole time to the work instead of three-fifths time, as in the case of previous directors. This increase was deemed advisable because more frequent visits to the schools were needed to keep the work up to a proper quality, because the number of schools in the city is constantly increasing, and because the work should be carried into the eighth and ninth grammar grades and high schools as soon as conditions permit.

During the present term more effort than before has been made to improve the sitting position of pupils. Improvement is difficult in many cases because desks and chairs do not fit the pupils.

At the beginning of the year your committee for the second time asked for an appropriation to renew furniture. The item was stricken out by the mayor. From the appropriation for repairs of schoolhouses the superintendent of public buildings has spent some money for adjustable castings which have been placed on old desks, but relatively to the need little has been done.

Last spring, at the request of this committee, the superintendent of public buildings placed window boards in all the schoolhouses in which window ventilation is necessary, and the teachers invariably speak of the benefit from them.

Last winter tests were made to determine the quality of the air in all the schoolrooms, and the results were reported to this Board in January. It will be remembered that in many buildings the air contained more carbon dioxide than it should. Last summer the plumbing of the schoolhouses was carefully examined and many defects were found, some of them serious. It may be that these defects contributed to the impurity of the air.

School Libraries and the Public Library. The English high school has a library of about three thousand volumes. The Latin school has only about one-third this number. Comparatively few books of a miscellaneous character have been added to these libraries for several years, the public library meeting the demand for such books. The need of the schools is for books of reference and for sets of books for class study.

The grammar schools, with the exception of the Morse and Webster, are not supplied with books for general reading. These are obtained from the public library, and during the year eight thousand five hundred sixteen books have been delivered to the schools.

The library and the schools are brought into close relation to each other. The librarian and his assistants spare no pains in making the library serviceable to teachers and pupils alike.

It has been well said, "that training pupils to read and love good literature is by far the most important work done in school. There is nothing else that a teacher can do at all comparable to it in value. It is the one thing the school does that continues to contribute to one's education so long as he lives. We should never forget that it is not the ability to read, but the use made of that ability, which contributes to the destiny of a child."

Evening Schools. The following account of the evening schools is given by Mr. Hubbard, who has had for the past three years the general supervision of these schools: —

There are seven evening schools — two drawing schools, one high school, and four elementary schools. In accordance with the new rules of the school board, there are two terms of the evening schools. The first term begins on the second Monday of October and continues every Monday, Wednesday, and Friday evening until the end of the week before Christmas. The second term begins on the first Monday, Wednesday, or Friday evening after the opening of the day schools in January, and continues thirty-five

evenings. The sessions begin at half-past seven and continue two hours. No session is held on the evening of a holiday or during the vacations of the day schools.

The evening drawing schools are under the supervision of the director of drawing for the day schools. There are two of these schools, one for instruction in mechanical drawing, which occupies four rooms in the Central Square building, and one for instruction in free-hand drawing, which occupies rooms in the English high schoolhouse. In the mechanical school two courses are provided, — a three years' course in machine drawing, and a three years' course in architectural drawing. In the free-hand school, provision is made for a three years' course in free-hand drawing, and for a class in modelling in clay. Diplomas are given to the graduates of either course.

During the year 1898–99 the mechanical school registered one hundred five pupils, and had an average attendance of fifty-nine, with four teachers and a curator. The free-hand school registered eighty-nine, with two teachers and a curator, and the average attendance was forty. Sixteen diplomas were given at the end of the term, — eight in the mechanical school, and eight in the free-hand school.

The cost of the mechanical school for 1898–1899 was: for salaries of teachers, $821; for care of building, lighting, etc., $190.18; for text-books and supplies, $90.77; a total of $1,101.95, or $18.67 per pupil on the average attendance of fifty-nine. The cost of the free-hand school was: for salaries of teachers, $385; for care of building, lighting, etc., $61.39; for text-books and supplies, $44.90; a total of $491.29, or $12.28 per pupil on the average attendance of forty.

The salary of a teacher in the evening drawing schools is $3.00 per evening, of a curator $1.00. No part of the salary of the director of drawing is charged to these schools.

The evening high school is held in the English high school building, and offers a three years' course of instruction in the following subjects: arithmetic, bookkeeping, penmanship, English composition, English literature, civics, history, algebra, geometry, phonography, Latin, French, and German.

During the year 1898–1899 three hundred ninety-five pupils were registered, and the average attendance for the term was one hundred seventy-seven, with eight teachers besides the principal, or a teacher for about twenty-two pupils. Diplomas were given to nineteen graduates. The cost of this school was: for salaries of teachers, $1,499; care of building, lighting, etc., $613.71; for text-books and supplies, $135.10; a total of $2,247.81, or $12.69 per pupil on the average attendance of one hundred seventy-seven.

The salary of the principal in the high schools is $5.00 per evening, and of each assistant $2.50.

The evening elementary schools occupy rooms in four of the grammar school buildings, the Allston, Putnam, Shepard, and Webster. During the year 1898-99, 763 pupils were registered in these schools, and the average attendance was 275. The cost of these schools for the year was: for salaries of teachers, $2,570; for care of buildings, lighting, etc., $735.22; for text-books and supplies, $97.31; a total of $3,402.53, or $12.37 cents per pupil on the average attendance of two hundred seventy-five.

The salary of a principal is $2.50 per evening, and of a teacher, $1.00 per evening.

In the elementary schools, reading, writing, arithmetic, geography, language, history, and bookkeeping are taught in classes, so far as classification is possible, but a large part of the work is individual. No definite course is arranged, but an opportunity is given to pupils to prepare to enter the evening high school, and certificates of admission are given those who are qualified to begin the work in that school.

The Allston school registered two hundred sixty-one pupils, and had an average attendance of one hundred for the session of fifty evenings. The average number of teachers was thirteen and seven-tenths, or one teacher for a little more than each seven pupils.

The Putnam registered two hundred one, and had an average attendance of eighty-one, with ten teachers, or one teacher for about eight pupils.

The Shepard registered one hundred forty-one, and had an average attendance of thirty-five, with an average of four and five-tenths teachers, or one teacher for each seven and six-tenths pupils.

The Webster registered one hundred sixty, and had an average attendance of fifty-nine, with an average of seven and six-tenths teachers, or one teacher for each seven and eight-tenths pupils.

Though a less number of pupils was registered in the evening schools in October, the average attendance to December 1 is much more satisfactory than last year.

Some decided measures should be taken to secure a more permanent and regular attendance. In some cities a deposit is required on admission which is returned at the end of the term, if the attendance has been satisfactory. Perhaps an inquiry into methods in other cities would assist us, for this evil of non-attendance detracts very largely from the value of our evening schools. It is hoped that the second term, which will begin January 3 and continue thirty-five evenings, will prove more satisfactory and profitable, as the drifting element has been nearly eliminated, and those who remain have an earnest purpose in attending.

It is hoped also that we shall be able to prepare more pupils to enter the evening high school next year by this extension of time, and by a careful reorganization of the schools, putting those who have made some progress, in classes, so that more class work can be done.

Truant Officers. Four officers are employed. The city is divided into four districts, and each officer has assigned to him the schools in one district. Among their duties, in addition to those defined by the statutes, are the following: to visit each school at least once a day, unless otherwise directed by the agent; to prevent children from loitering about the school premises; to notify the teachers of all cases of contagious and infectious diseases reported by the board of health; and to attend the evening schools to assist in the preservation of order. Meetings of the committee are held to hear the reports of the officers, and decide what action shall be taken in regard to the cases brought before them. Truants are sent by the court to the Middlesex county truant school at North Chelmsford.

By the rules adopted in April the work of the truant officers is done under the supervision of the committee on schoolhouses, and under the direction of this committee it is the duty of the agent of the Board to consider all cases of truancy, of persistent violation of the rules of school, or of juvenile vagrancy; of unlawful detention from school, or neglect by parents; or of any failure on the part of pupils or parents to comply with the rules of the school committee or the public statutes relating to the schools.

It is also his duty to certify the records of any such case when it is presented before the district court, and to exercise such supervision of the boys who are sent by the court from Cambridge to the Middlesex county truant school as may be allowed under the statutes.

The following is from the report of this committee: —

Whole number of absences investigated	16,508
Truancy, first offence	568
" third "	134
" fifth "	142
Complaints at court	21
Children put on probation	26
Sentenced by the court	21
Visits to mercantile establishments	242

Since May the officers have reported frequently, sometimes daily, at the office of the agent, and we can hardly speak too highly of the interest and perseverance they manifest in their work. All are working very hard to prevent the absenteeism which so much reduces our average attendance and too often is the beginning of truancy which ends in the truant school.

Printed letters quoting the truancy laws have been prepared which are sent to parents when children are absent, and usually they result in

good attendance when the parent has proper control of the child. In many homes this is not the case, and some boys are sent to the truant school because it is better for them than their homes. The average number in the truant school during 1897–98 was thirty-four and nine-tenths, the average during 1898–99 is thirty-four four tenths, a slight decrease. There are now thirteen boys in the school who were there a year ago, and seventeen have been committed and twenty-five discharged on expiration of sentence or released on probation, leaving thirty-two still in the school. Two who were sentenced during the year have appealed, and the cases are on file. One parent has been fined for not observing the law in relation to absentees. The expense for the care of truants for the year is $1,788.29 for board, and $43.05 for transportation; total, $1,831.34, or $32.70 for each boy for the year.

There have been three hundred ninety-nine cases of diphtheria, one hundred forty-six cases of scarlet fever, eleven cases of membranous croup, and four hundred sixty-nine cases of measles reported by the board of health to the school department and through the truant officers to the schools.

The law excluding persons with measles and members of households where they occur works much hardship, and we believe harm; and that without any corresponding advantage. We think the law should be repealed.

For the first time the census has been taken in September. The officers did what they could before the schools began, and nine men were employed as canvassers. The results are far from satisfactory, and confirm the opinion that we cannot secure a proper school census in Cambridge in the month of September. The expense was three hundred sixty-seven dollars, besides that of tabulating the results, and the results are not as satisfactory as when the census was taken in the old way in the spring and early summer. School returns show more children in the schools, public and private, than were found by the enumerators.

Mr. Cabot obtained the statistics of the private schools as follows: — Seventeen schools report two thousand seven hundred thirteen pupils. St. Mary's parochial school, Norfolk street, reports one thousand five hundred forty; St. Paul's parochial school, Mt. Auburn street, reports six hundred ninety; and the French school, Harvey street, North Cambridge, one hundred five. These schools report that no tuition is required. The fourteen other private schools, containing three hundred seventy-nine pupils, report that they receive $47,450 for tuition. The French school should be investigated. It is reported that the subjects taught are not in conformity with the requirements of the statutes, the sessions are short and holidays many, and thus a tendency to truancy is promoted in the public schools in the vicinity. It is also reported that

the children who attend this school and then come to the public schools are not prepared to do the work which others of the same age who attend the public schools do easily.

Three hundred twenty-two age and schooling certificates have been issued from the office of the superintendent during the school year July 1, 1898, to June 30, 1899.

April 1, 1899, there were thirty-one state wards attending the Cambridge schools. They are supported by the state, and the city receives fifty cents per week for the tuition of each child. The Commonwealth has paid $453.50 to this city during the year ending July 1, 1899.

During the financial year one hundred twenty-five non-resident pupils have attended our schools, for whom tuition to the amount of $4,533 has been paid.

Janitors. Section 31 of the city charter provides that "The mayor shall appoint the janitors of the schoolhouses, subject to confirmation by the school committee; and that such janitors shall perform their duties under the direction of the school committee."

Under the direction of the committee on schoolhouses, the agent supervises and directs the work of the janitors of schoolhouses, and reports to the committee such matters as seem to need consideration. The principals of the schools are required to report each month whether or not the work is done in a satisfactory manner.

The heating of the schoolhouses is under the charge of a person appointed for his special fitness for this work. Mr. Edward B. Dale has rendered valuable service during the past three years.

Contagious Diseases. In 1894 the board of health, in accordance with the request of the school committee, appointed a physician, whose duty it is to examine all cases of contagious diseases reported, and to direct the exclusion from the schools of all pupils whose presence will, in his opinion, be a menace to the health of others. He reports his action on every case to the secretary of the school committee. The physician issues all certificates authorizing such children to return to school, as is provided by chapter 496, section 11, of the acts of 1898.

As a further precaution against contagious diseases, the board of health established February 26, 1896, a system of medical inspection of children in the schools. The city was divided into six districts, in each of which a physician was appointed to visit the schools each day. The physician examines only those children who are indicated by the teachers in the several rooms as having shown symptoms of illness, and such children are sent home if the physician so advises.

Once each term it is the duty of the principal of each school to call the attention of the pupils to the following rule: —

No pupil who has visited any apartment in which a person is, or

within two weeks has been, sick with small-pox, varioloid, diphtheria, or scarlet fever, shall be allowed to attend school until the expiration of two weeks after such visit.

Teachers, Appointments, Resignations. There are now three hundred ninety-six teachers in the schools. Fifty-two of this number have been appointed during the year. Eleven of these, however, were, in fact, re-appointments for the Rindge manual training school when it came under the management of the school committee, the teachers of the manual training department having been appointed by the supervising committee of that school.

The changes in the courses of study in the high schools made it necessary to increase the number of teachers in these schools. Two new schools were opened, one in the Allston building made vacant by the removal of the school to the Roberts schoolhouse, the other in the Shepard building made vacant by the removal of the school to the Ellis schoolhouse. A part of the teachers in these new schools were transferred from other schools, the others were new appointments.

Twenty teachers have resigned during the year, but of these only three left the schools for positions with higher salaries.

A person to be eligible to the position of teacher in a kindergarten must have had a course in a high school, a course in a kindergarten normal school, and must be able to play the piano; to be eligible to a position in a primary or grammar school, he must have had a course in a high school, a course in a normal school, and a year's experience in teaching; to be eligible to a position in a high school, except in the manual training department of the manual training school, he must be a college graduate. Equivalent preparation may be accepted.

When a teacher has been nominated for a position in a kindergarten or primary school, or for a position below that of principal or master in a grammar school or high school, two persons of experience among the teachers who are not connected with the school in which the nominee is to serve, shall be deputed by the superintendent to visit the teacher nominated and to examine him at work. Each person so deputed shall report in writing to the superintendent; and these reports shall be kept on file by him and shall be open to inspection by members of the Board only. For a nomination to a position in a high school, the superintendent, with the consent of the committee on high schools, may dispense with such examination, or may depute as examiners teachers connected with the school in which the nominee is to serve, or persons not in the service of the city.

The committee on teachers shall consider all nominations made by the superintendent. They shall confer with the superintendent, consider the reports of the examiners deputed by him, make further inquiry at discretion, and report to the Board for final action.

Any nomination referred to the committee on teachers shall lapse at the expiration of four months, not counting the summer vacation. A person who has failed of confirmation shall not be nominated to a similar position within two years, except on the approval of this committee.

This committee shall inquire and report to the Board in executive session, as to the success of any teacher in the employment of the city, when so requested by any member of the Board or by the superintendent; and no teacher whose success is under inquiry shall receive the regular increase of salary, except on the recommendation of this committee.

Experience in teaching, whether in or out of the city, may be considered in fixing the salaries of teachers.

Under the direction of the superintendent, teachers may visit other schools to observe the discipline and instruction. They may be required to attend teachers' meetings or courses of instruction in methods of teaching for one hour a week. Such meetings may be held on Saturday mornings during term time or at such other time, not in school hours, as the superintendent may direct. Meetings in addition to those indicated above may be held by the superintendent or may be called by him, on request of directors in special subjects.

Any teacher who has served in the city for ten years may, on recommendation of the superintendent and vote of the Board, have leave of absence for one year for purposes of study or travel, and may receive one-third of his salary.

SALARIES OF TEACHERS AND SCHOOL OFFICERS.

LATIN SCHOOL AND ENGLISH HIGH SCHOOL.

Head Masters	$3,000 00
Masters	2,000 00
Masters' Assistants	1,200 00
Teachers, first year	700 00
with an annual increase of $50 until $950, the maximum, is reached.	
Assistant Teachers, first year	500 00
" " second year, and each succeeding year	600 00
Substitutes, each session	3 00

RINDGE MANUAL TRAINING SCHOOL.

Head Master	$3,000 00
Master's Assistant	1,300 00
Teachers, academic side, first year	700 00
with an annual increase of $50 until $1,000, the maximum, is reached.	
Teachers, manual training side, salaries range from $800 to $1,500.	
Substitutes, each session	3 00

WELLINGTON TRAINING SCHOOL.

Master	$2,500 00
Supervising Teachers (three) first year	900 00
" " second year and each succeeding year	1,000 00
Master's Assistant, first year	800 00
" " second year, and each succeeding year	900 00
Teachers of the eighth grade	700 00
Teachers of the seventh grade (one year's experience)	450 00
Teachers of the other grades	250 00

GRAMMAR AND PRIMARY SCHOOLS AND KINDERGARTENS.

Masters of grammar schools	$2,000 00
Sub-masters, first year	1,000 00
with an annual increase of $100 until $1,400, the maximum, is reached.	
Masters' Assistants, first year	800 00
" " second year, and each succeeding year	900 00
Teachers of the ninth grade, first year	750 00
" " " " second year, and each succeeding year	800 00
Special Teachers in grammar schools, first year	700 00
" " " " " second year, and each succeeding year	750 00
Principals of primary schools, first year	700 00
" " " " second year, and each succeeding year	750 00
with five dollars additional for each room under her supervision.	
Teachers of grammar and primary schools, and principals of kindergartens	450 00
with an annual increase of $50 until $700 is reached.	
Substitutes, continuously employed	400 00
" in grammar and primary schools, each session	1 00
" in kindergartens, each session	1 50

SPECIAL TEACHERS AND OFFICERS.

Director of Music	$2,000 00
Director of Drawing	1,800 00
Assistant Teacher in Drawing	800 00
Director of Nature Study (three-fifths time)	1,000 00
Director of Physical Training	850 00
Teachers of Sewing	600 00
Superintendent of Schools	3,500 00
Supervisor of Primary Schools	1,200 00
Agent of the Board	2,100 00
Truant officers (four are employed)	1,000 00
Secretary of the School Committee	400 00
Page of the School Committee	25 00
Secretary and Librarian of the Latin School	500 00
Secretary and Librarian of the English High School	600 00

The following rules apply to special cases: —

Upon the recommendation of the superintendent and the committee on teachers the salary of a teacher in a grammar or primary school or of the principal of a kindergarten may be increased from $700 to $750, provided such teacher has served at least one year. The number of teachers whose salaries may thus be increased is not to exceed one-third of the whole number of teachers in these grades.

Assistant teachers, that is, teachers not in charge of a room, are paid $450 the first year, $500 the second, and $550 the third and each succeeding year, and in the case of assistants in the kindergartens, $600 for the fourth and each succeeding year.

Terms, Holidays, and School Hours. The school year is divided into three terms: —

The time for beginning the autumn and spring terms, and for closing the winter and spring terms, is fixed annually at the regular meeting of

the committee in February. The autumn term ends December 23. The winter term begins January 2 (or the day after that celebrated as New Year's Day).

The holidays are Saturdays; Thanksgiving day, with the preceding day and the day following; the twenty-second of February; the nineteenth of April; Memorial day; the seventeenth of June; and in addition to these, for the high schools, Commencement day at Harvard College.

The sessions of the high schools begin at 8.30 A. M., and end at 1.30 P. M. The sessions of the manual training school begin at 8.30 A. M., and end at 2.30 P. M. These schools have a recess of half an hour in each session.

With the exception of the Russell school, the morning sessions of the grammar and primary schools begin at 9 and end at 11.45. The afternoon sessions begin at 2 and end at 4, except during the months of November, December, and January, when they begin at 1.30 and end at 3.30. The grammar and primary schools have no outdoor recess. The sessions at the Russell school begin at 8.30 A. M., and end at 1.30 P. M.

The sessions of the kindergartens are from 9 A. M. to 11.50 A. M.

REVISION OF THE RULES.

At the first regular meeting of the committee in January, 1899, a special committee was appointed to consider a general revision of the rules and regulations of the Board. This committee held frequent meetings and in March submitted its recommendations in the form of a new draft, with the following explanations and statements: —

The public schools of Cambridge have grown so much, both in the number of pupils and in extent, during the past few years, that it has become almost impossible for the members of the school committee to attend to the numerous details of administration, such as the selection of well qualified teachers, the choice of new text-books, and questions concerning the discipline and the health of the pupils. These matters, while nominally still in charge of committees or individual members, in most cases have been left practically to the judgment of the superintendent. This in itself is the best method, and will give the best results. Yet, if the decision now really lies with the superintendent, it is proper that the changed conditions should appear in the rules, and the responsibility be placed where it belongs. Furthermore, many of the questions which have been decided by a standing committee or by the superintendent are so clearly of an executive nature that they can be looked after better by an executive officer or agent; by making this change the superintendent will have more time for other strictly educational matters.

The purpose of the committee in preparing this draft has been, — first, to relieve the members of the Board of much of the administrative work which has hitherto occupied their time; — second, to place more authority in the hands of the superintendent, thus concentrating responsibility and insuring expert management; — and third, to put the executive work in charge of an agent

To carry out this purpose the number of standing committees has been reduced, generally by consolidation, and their duties, except in regard to the selection of teachers and text-books and the expenditure of money, will consist chiefly in general supervision The superintendent is to nominate all teachers, to consider all changes in text-books, and to have general authority over all educational matters; he is also

given the right to speak in the Board. The agent is to be the executive officer of the standing committees, to purchase and distribute supplies, to prepare bills and pay-rolls, to take the school census, to supervise the work of janitors and truant officers, and to have authority in matters of discipline. The committees on finance and supplies are to direct the expenditure of money, to approve all bills and pay-rolls, and to report their action to the Board. Teachers nominated by the superintendent, except for the the higher positions, must be visited and examined by two experts, usually chosen from among the teachers in the service of the city; and their reports will be accessible to the members of the Board; thereafter the nominations must be reported on by a standing committee. A similar arrangement as to reports is provided in regard to text-books. All appointments, except for temporary employment, are to be made by the superintendent only after consultation with the committee having general supervision of the school or special subject.

The Board will have to elect annually the superintendent, agent, truant officers and all teachers, to fix their salaries, to confirm teachers nominated by the superintendent, to adopt all text-books, to determine the courses of study, to give advice as to appointments, and to consider all matters of genuine interest in regard to the schools.

This report shows the plan and scope of the new rules. In the final action the committee is responsible for the management of the schools, but it devolves upon the superintendent to take initiatory steps in matters relating to their most vital interests, namely, the selection of teachers and of text-books, and the annual preparation of a list of teachers whom he recommends for re-election.

The change in the rules was not made at the suggestion of the superintendent. He has never felt that the schools have suffered because their management was not more fully under his control. His suggestions and recommendations have always received the most considerate attention from the committee. The changes, however, are in accordance with the trend of public sentiment that in the administration of affairs, authority should rest with one person in order to fix responsibility for results.

While the new rules do not give the superintendent absolute authority in any case of real importance, they allow him greater freedom of action and thereby increase his responsibility. He becomes in fact, as well as in name, the director of the educational affairs of the schools, with the limitation that his action is subject to the approval of the committee. This limitation is not a source of weakness, but of strength. It protects him from outside influences of a personal character unfavorable to the schools, and it tends to make him more careful and considerate in all his plans and actions. The change will not materially affect the management of the schools so long as the present superintendent is in office, and the spirit of the committee continues to be what it has been in the past. During these many years there has been but one purpose shown both by the committee and the superintendent, and that has been to do what seemed to be for the advancement of the schools. The question of authority has never been raised. The committee has sought the views of the superintendent, and the superintendent has had confidence in the judgment of the committee even when it differed from his own.

Much time and thought were given to the revision of the rules, and radical changes were made; and what may seem remarkable, the new rules were adopted by a unanimous vote of the Board. The outline of the changes was given in the report of the committee as printed above, but the rules relating to the duties of the superintendent and to those of the agent will be of special interest to persons engaged in the management of schools. They are as follows: —

Duties of the Superintendent. Annually, at a meeting in June, the Board shall elect a superintendent of the public schools and fix his salary. He shall enter upon his duties the first day of September following.

The superintendent shall have the care and supervision of the schools under the direction of the Board; shall see that its rules are carried into effect, and perform such other duties as the Board shall direct.

The superintendent shall make in writing, except as otherwise provided in these rules, all nominations of teachers in the schools, after consultation with the committees of the schools in which the nominees are to serve, and these nominations shall be referred to the committee on teachers. For a nomination to a position in a high school or a grammar school, the superintendent shall also consult the principal of the school.

When a teacher has been nominated for a position in a kindergarten or primary school, or for a position below that of principal or master in a grammar school or high school, two persons of experience among the teachers who are not connected with the school in which the nominee is to serve, shall be deputed by the superintendent to visit the teacher nominated and to examine him at work. Each person so deputed shall report in writing to the superintendent; and these reports shall be kept on file by him and shall be open to inspection by members of the Board only. For a nomination to a position in a high school, the superintendent, with the consent of the committee on high schools, may dispense with such examination, or may depute as examiners teachers connected with the school in which the nominee is to serve, or persons not in the service of the city.

Nominations of principals and masters in high and grammar schools, of directors, and of supervisors shall lie upon the table at least one month. All papers, testimonials, and other evidence bearing upon the qualifications of such nominees, shall be kept on file in the office of the superintendent and shall be open to inspection by members of the Board only.

The superintendent shall prepare and submit to the Board annually, at a meeting in June, a list of teachers recommended by him for re-election.

He shall make nominations of principals of the evening schools at the regular meeting of the Board in September. Assistants in the evening schools, not to exceed one for each eight pupils, shall be appointed by the superintendent, after consultation with the committee on evening schools.

He shall make in writing all recommendations for promotion of teachers, and these shall be referred to the committee on teachers.

He shall have authority to transfer teachers from one school to another, but he shall report all transfers to the Board at its next regular meeting. Any change of salary of teachers transferred shall be referred to the committee on finance.

He shall have authority to employ as many substitutes and temporary teachers as may be necessary to take the places of absent teachers.

He shall have power to suspend any teacher but shall report such suspension at the next regular meeting of the Board.

He shall advise the teachers as to the best methods of instruction and management, and for this purpose he may hold meetings of the teachers, and may dismiss their respective schools at such time as he may think best, not exceeding one day in each term.

All proposals for changes in text-books shall be made to the superintendent. If believed by him to deserve consideration, he shall appoint two persons, one of whom shall be a teacher in the service of the city, and they and the superintendent shall examine and each make a written report on the proposed books. These reports shall be kept on file in the office of the superintendent, and shall be open to inspection by members of the Board only. Changes so considered may be recommended to the Board for adoption, when they shall be referred to the committee on text-books.

He shall be present at all meetings of the Board except while the election of the superintendent is under consideration, and may speak on all questions.

He shall make a written report to the Board annually, giving an account of the schools and making such suggestions as he may deem advisable.

He shall have authority to suspend the grammar and primary schools and kindergartens on stormy days, and on very stormy days, the high schools. The signal for this is five strokes of the fire-alarm repeated once. When given at 8.15 A. M., the morning session of the grammar and primary schools and kindergartens shall be omitted; when given at 12.45 P. M., during the months of November, December and January, or at 1.15 P. M. during the other months, the afternoon session shall be omitted. When given at 7.30 A. M., there shall be no session of the high schools.

Duties of the Agent. Annually, at a meeting in June, the Board shall elect an agent and fix his salary. The agent shall be the executive officer of the standing committees of the Board, and shall enter upon his duties on the first day of September following.

Under the direction of the committee on supplies, he shall purchase, distribute, and have the care of all books, apparatus, and supplies furnished for the use of pupils, teachers, or officers of the Board; keep account of the same, and, annually, in the month of November, make a detailed report to this committee of all such purchases and distributions, and also of the stock on hand.

Under the direction of the committee on schoolhouses, he shall supervise and direct the work of the janitors of schoolhouses and report to the committee such matters as seem to need their consideration. He shall prepare and approve, on behalf of the Board, the pay-rolls and bills of the janitors.

Under the direction of the committee on schoolhouses, he shall consider all cases of truancy, of persistent violation of the rules of school, or of juvenile vagrancy; of unlawful detention from school, or neglect by parents; or of any failure on the part of pupils or parents to comply with the rules of the school committee or the public statutes relating to the schools. He shall certify the records of any such case when it is presented before the district court, and shall exercise such supervision of the boys who are sent by the court from Cambridge to the Middlesex county truant school as may be allowed under the statutes. He shall, on the behalf of the Board, examine and approve all bills for the expenses incurred by the city because of such children.

He shall direct the taking of the school census required by the public statutes and shall obtain the statistics of the private schools in the city; the expense so incurred shall be charged to the appropriation for incidental expenses.

He shall have the supervision of the attendance of state wards in the schools and present bills for the tuition of these children to the state board of charity; he shall attend to the collection of the tuition of non-resident pupils.

Under the direction of the committee on evening schools, he shall supervise the organization and management of these schools.

Under the direction of the superintendent of schools, he shall consider all cases of tardiness, absence, or disobedience referred to him by the superintendent.

He shall prepare and submit to the respective committees all bills, pay-rolls, estimates of expenditures and financial reports; shall purchase, distribute and keep account of tickets ordered for the use of members of the board, the officers and special teachers; and perform such other duties as the several committees may from time to time require. Annually, in the month of November, he shall report in writing to the several committees.

It will be seen that the duties of the agent are varied. Under the direction of certain committees he is to purchase, distribute, and have the care of all books and supplies; to supervise and direct the work of the janitors; to have charge of all cases of truancy; to supervise the organization and management of the evening schools; to direct the taking of the school census; to consider cases of tardiness, absence, or disobedience referred to him by the superintendent; to prepare all pay-rolls and estimates of expenditure; and to perform such other duties as the several committees may from time to time require. A man to do this should have good business qualities; he should have executive ability; he should know how to deal wisely with children and parents; and he should have an earnest desire to save the boys who are going astray. Such a man is Mr. Sanford B. Hubbard, the present agent. It is now nearly fourteen years since he came into close relation to the superintendent, and no man could have done his work more faithfully or efficiently.

FRANCIS COGSWELL,
Superintendent of Public Schools.

In School Committee, January 18, 1900.

Ordered, That the report of the superintendent as read and outlined by him be accepted and adopted as the annual report of the school committee for 1899, and that the secretary be authorized to append the names of the members thereto.

SANFORD B. HUBBARD,
Secretary.

Members of the School Committee for 1899

EDGAR R. CHAMPLIN, *Chairman ex officio.*

WILLIAM TAGGARD PIPER.	* JOSEPH J. KELLEY.
ELIZABETH Q. BOLLES.	† PHILIP M. FITZSIMMONS.
FRANK W. TAUSSIG.	CHARLES F. WYMAN.
ROBERT O. FULLER.	MARY E. MITCHELL.
CAROLINE L. EDGERLY.	ROBERT E. ELY.
GEORGE W. BICKNELL.	CAROLYN P. CHASE.
EDWARD B. MALLEY.	FREDERIC W. TAYLOR.
CARRIE S. FAIRBAIRN.	SETH N. GAGE.

* Died April 28.

† Elected June 13.

REPORT OF THE TRUSTEES OF THE DOWSE INSTITUTE

CAMBRIDGE, December 1, 1899.

To the Honorable, the City Council: —

The Board of Trustees of the Dowse Institute respectfully reports that a course of six lectures was given in Union Hall, Cambridgeport, beginning January 3, and ending February 9, 1899.

The Trustees, after careful deliberation, decided to make the course free to the public, and the subsequent success of this plan justified their action.

An attested copy of the accounts of the Treasurer is herewith submitted, showing the amount of receipts and expenditures.

FRANK A. ALLEN,
W. A. BULLARD,
GEO. HOWLAND COX,
} *Board of Trustees.*

W. A. BULLARD, TREASURER, IN ACCOUNT WITH DOWSE INSTITUTE.

Dr.		*Cr.*		
1899.		1899.		
To City of Cambridge, interest on fund one year	$600 00	By J. H. Ford, for printing	$9 00	
		Cambridge Tribune, advertising	10 00	
		Cambridge Press, advertising	10 00	
		Cambridge Chronicle, advertising	10 00	
		Chas. L. Russell, doorkeeper	6 00	
		A. F. Buffum, doorkeeper	6 00	
		F. M. Buffum, doorkeeper	6 00	
		Union Hall Asso., rent of hall	180 00	
				$237 00
		Roberts Harper, for a lecture	$75 00	
		J. C. Bowker, for three lectures	165 00	
		John Fiske, for a lecture	50 00	
		T. W. Higginson, for a lecture	50 00	
				340 00
		Balance		23 00
	$600 00			$600 00

ATTEST: W. A. BULLARD, *Treasurer.*

REPORT OF THE COMMISSIONER FOR THE BOSTON AND CAMBRIDGE BRIDGES

To the Honorable the Mayor and City Council of the City of Cambridge:—

Sirs,— The Commissioner for the Boston and Cambridge Bridges, having the charge of the Harvard, West Boston, Craigie, Prison Point, Brookline Street, River Street, Western Avenue, and North Harvard Street Bridges, submits his annual report of the matters pertaining to said bridges.

HARVARD BRIDGE.

In April of this year the roadway for the entire length of the bridge was newly sheathed and consequently there was a smooth surface all summer.

The iron spans and panels on the outside of the bridge and draw and some of the girders underneath the bridge, Cambridge end, have been painted; in 1897 a portion of the iron work on the Boston end of the bridge was painted; next year we expect to finish painting the iron work where needed.

In April a new contract was made for one year with the Welsbach Street Lighting Company. They have taken off the old globes and replaced them by putting on more ornamental ones and adjusting springs to them. By doing so the lights have been improved very much. This company lights the Boston end of the bridge. The Cambridge Electric Light Company lights the Cambridge end and draw with incandescent lights. They give good satisfaction.

The draw tender and his assistants do all ordinary repairs, clean the electric light globes once a week, keep the sidewalks and draw piers free from snow and ice in winter, and keep the electric machinery to move the draw in good order. They have also painted the inside of the house and gates to draw. The bridge is cleaned once a week.

In April, 1900, the sheathing the entire length of the bridge will have to be renewed. We find that after about seven months' wear we have to keep repairing it. In taking up the old plank on roadway we saved the best ones and kept them for patching; in that way there was quite a saving. If the travel increases the next two years as it has in the past two years it will be necessary to sheathe the roadway twice a year.

WEST BOSTON BRIDGE.

The paving on the roadway the entire length of the bridge was unsafe for travel. Early in the spring it was repaired, only doing what was absolutely necessary to prevent accidents. The under plank of the draw was repaired and the whole surface sheathed.

The bridge was closed to travel October 19th. The new temporary bridge to take the place of the old one was opened for travel on the above date, the first car going over it at 10.30 P. M. This new bridge so far has given good satisfaction. The travel over it seems to be increasing since it was first opened. The roadways being sheathed with two-inch spruce gives a better surface for teams than the old bridge did with its uneven surface of paving. This new bridge has two flap draws, one opposite the old one, the other in the centre of the bridge between the park wall on the Boston side and First Street on the Cambridge side. If there is to be a draw in the new Cambridge bridge to be built it will be opposite this draw in the centre of the temporary bridge. A great many people have inquired why there should be two draws. For that reason I give this explanation. The bridge commission to build this new Cambridge bridge have now the matter of a drawless bridge before Congress to be acted upon. If their request be granted, this draw on temporary bridge will not be used. The length of this temporary bridge is 2,248 feet; 47 feet 2 inches wide; roadway, 36 feet wide; one sidewalk, 10 feet wide; two draws with four leaves, each draw opening 36 feet, and two car tracks. The draw now in use is raised by electricity. It will be necessary to renew the sheathing on the bridge every year. It is lighted by eleven arc lights. The bridge is cleaned every week. The draw tender and assistants keep the sidewalks and piers free from snow and ice, and the electrical machinery to move the draw in good order, and do all ordinary repairs. The engine, boiler and machinery to move the old draw have been taken out, and a cylinder stove substituted, making a large saving in coal. The old draw is to be cut in two parts and carried to Charlestown to be used on a temporary bridge now building. The old bridge will be left in place till the new Cambridge bridge is contracted for. The contractor will then use it to store his material on. As the new bridge progresses, the old one will be removed. The draw pier from the temporary bridge to the small house on the pier has been replanked and new timbers put in where necessary.

CRAIGIE BRIDGE.

Put new timbers and trusses under pier to keep draw tender's house in place; new timbers on engine house pier to support new shafting that

was put in to move the draw, repaired houses on Cambridge end of bridge, put new gutters on engine house, had paving repaired where necessary. The draw is in very bad condition and had to be repaired quite often. The three-inch planking on the surface of the draw partly renewed and sheathed the past year three times with two-inch spruce. The draw tender and assistants do all ordinary repairs and keep the sidewalks and piers free from snow and ice. Next year a large portion of this bridge surface will need repaving and sidewalks on Boston end relaid, fences and draw painted, pier connecting with draw tender's house repaired, also draw pier down stream rebuilt.

PRISON POINT BRIDGE.

Put new timbers under the draw, renewed the planking and sheathed it with two inch spruce three times. The timbers under the sidewalks and the covering on surface were so decayed that it was necessary to remove them and put in their place two new sidewalks; fences on bridge repaired, draw tender does all ordinary repairs, removes the snow and ice from bridge and piers and sweeps the bridge at other times.

This bridge and draw is in very bad condition; we are looking forward to the time when the Boston and Maine Railroad Company will build the overhead street and bridge as we believe they have permission so to do.

BROOKLINE STREET BRIDGE.

Re-planked surface of draw with three inch spruce and sheathed it with two inch spruce.

Sheathed the whole length of the bridge with two inch spruce, repaired guard to bridge. There has been such an increased amount of travel from Brookline over this bridge this last summer and fall, caused by the Cambridge Park Commissioners filling their low lands just off the bridge on the Cambridge side and requiring a great many teams to be employed that it will make it necessary to sheathe the whole surface of the bridge its entire length next spring, also to sheathe the up-stream draw pier. The draw tenders sweep the bridge every week and do all ordinary repairs.

RIVER STREET BRIDGE.

The surface of the bridge and draw were in bad condition, the plank under the sheathing being decayed, we removed them and put in place four-inch and three-inch spruce, and sheathed the whole with two-inch

spruce; put new flaps to draw, shingled the two houses on the pier, built a small house ten feet by six feet, one story, for storage and coal, houses painted inside and outside by the men on the bridge.

Heretofore on the bridge there was a single track with a switch at each end of the bridge, travel was very much impeded by the delay, and passengers in cars found a great deal of fault. The Boston Elevated Railway Company asked permission to lay a double track; we granted their request, they agreeing to strengthen the draw at their own expense, which they did, by putting hard pine timber under each leaf of draw. This bridge and draw and draw openers are very old and have to be looked after very carefully so no accidents will occur. The water-ways to the pier will have to be replanked next spring.

The draw tenders and assistants sweep the bridge and piers and do all ordinary repairs.

WESTERN AVENUE BRIDGE.

Where it was necessary the underflooring on bridge was removed and new spruce plank put in place. The whole bridge then sheathed with two-inch spruce. The Boston Elevated Railway Company asked permission to put a double track over this bridge agreeing to make everything satisfactory to the Commissioners; the request was granted, they placing under the draw four hard pine timbers without cost to the two cities. When examining the bridge near the draw we found the most important timbers to sustain the bridge at the Boston end were all decayed; they were replaced by putting in new hard pine timbers. To forward this work mechanics worked day and night. The Boston Elevated Railway Company paid a portion of this expense. The bridge is in about the same condition as River Street Bridge. The water-ways to the pier will have to be replanked next spring.

The draw tenders and assistants keep the bridge and piers clean and do all ordinary repairs.

NORTH HARVARD BRIDGE.

In my last report to the Mayor and City Council I called their attention to the necessity of a new bridge to take the place of this old and worn out one; we are continually patching it to make it secure for travel. This new bridge when built should be of iron or steel, strong and ornamental, and the width of the roadways connecting with it. It is in a very prominent place, our beautiful Cambridge Park on one side with a broad avenue leading to the colleges; on the Boston side with a boulevard and speedway

along the banks of the Charles River just finished by the Metropolitan Park Commission; a fine avenue just completed by the Boston Street Department from the bridge to Brighton; other improvements have been made, notably at Soldiers Field; the very artistic fence surrounding the field, and inside the enclosure good buildings have been erected and still other changes are being made to beautify the places in the vicinity of the bridge, and it seems to me that all it requires now to make it complete is this new bridge.

The amount of revenue received for rents, dockage, repairs to Boston Elevated Railway Company's tracks, etc., during the year has been $1,426.86, one-half of which, $713.43, has been paid to each city.

Took advantage of the low price of spruce plank last fall, bought and placed on the different bridges for use over fifty thousand feet of two-inch spruce.

Respectfully submitted,

WILLIAM J. MARVIN,

Commissioner for Boston and Cambridge Bridges and Harbor Master for Cambridge.

NUMBER OF TIMES THE DRAWS IN THE BOSTON AND CAMBRIDGE BRIDGES HAVE BEEN OPENED AND THE NUMBER OF VESSELS WHICH HAVE PASSED THROUGH FOR THE YEAR BEGINNING DECEMBER 1, 1898, AND ENDING NOVEMBER 30, 1899.

Date.	CANAL OR CRAIGIE'S.		HARVARD.		PRISON POINT.		WEST BOSTON.		RIVER ST.		BROOKLINE ST.		BOYLSTON ST.		WESTERN AVE. TO CAMBRIDGE.	
	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.	Number of Draw Openings.	Number of Vessels passing Through.
December, 1898.....	226	428	154	204	36	55	129	278	66	119	81	159	43	86	42	75
January, 1899.....	171	260	30	34	70	119	54	105	14	25	17	28	none	none	4	8
February, "	77	127	23	24	22	41	32	54	4	8	5	8	2	3	2	5
March, "	188	338	90	108	41	65	83	162	48	105	56	97	33	66	37	85
April, "	245	366	115	155	72	105	95	176	81	143	76	137	54	111	60	118
May, "	320	504	177	196	39	51	158	244	106	169	113	188	58	87	78	121
June, "	300	448	141	158	66	105	105	178	66	113	75	127	35	62	54	97
July, "	320	516	138	239	59	91	177	329	96	171	118	283	53	88	86	150
August, "	300	446	163	198	65	106	212	494	72	129	83	141	47	92	68	121
September, "	238	332	132	180	30	43	109	185	64	115	28	55	75	143	54	101
October, "	304	439	143	168	27	40	124	190	73	115	85	131	42	63	58	88
November, "	320	459	138	165	31	52	105	173	75	123	86	134	54	94	75	151
Totals....	3,009	4,663	1,444	1,829	558	873	1,383	2,568	765	1,335	823	1,488	496	895	618	1,120

REPORT OF THE SEALER OF WEIGHTS AND MEASURES

OFFICE OF SEALER OF WEIGHTS AND MEASURES,
CAMBRIDGE, December 1, 1899.

To the Honorable, the City Council: —

I have the honor of submitting the report of the Department of Weights and Measures for the year ending November 30, 1899.

Amount of appropriation		$1,645 00
Amount of revenue received	$517 29	

EXPENDED.

For salaries: —

Sealer, A. F. Roberts	$916 63	
Assistant, Edward Dowling	322 50	
Board of horse and care of wagons and harnesses: —		
George D. Merrill, November 1, 1898, to March 1, 1899, four months	100 00	
City stable, Raymond Street, March 1, 1899, to November 30, 1899	162 00	
Horse shoeing, J. B. Rufer, three months	4 00	
" " Street Department, April	70	
Repairs on wagon	1 50	
Repairs on harnesses	2 70	
Stamps and burning brands C. 99	5 00	
Publishing annual notice	54	
Boston Elevated Railway (car tickets)	10 00	
City Messenger, stationery, postage stamps, etc.	5 75	
Printing postal cards, notice to milkmen	1 50	
1 lb. Bottle Acid, for marking milk bottles	4 25	
One stable blanket and halter	4 75	
Hardware, nails, hitching weight, etc.	3 45	
Nine books, sealing receipts and certificates	8 75	
One new wagon	$110 00	
Credit old wagon	20 00	
	90 00	
		$1,644 02
Unexpended balance		98

Whole number of scales, weights and measures inspected	56,889
Whole number of scales, weights and measures condemned	3,129
Whole number sealed	53,760
Whole number found incorrect and adjusted	329
Whole number of milk cans and bottles condemned	3,065
Whole number of scales, weights and measures condemned	64
Whole number condemned	3,129

This department has been unusually busy this year, in fact the work has nearly doubled that of last year. This large increase of work has principally been done at the office of the sealer, for which no revenue has been received.

The milkmen have made a universal change from small cans to bottles in which they deliver milk to their customers, and as the law demands that all weights and measures shall be sealed by the sealer, it has been the principal cause of the extra amount of work, and in order to do this work with as little embarrassment as possible to the milkmen in the prosecution of their business, I have had to employ extra help.

I have been called upon to do quite a good deal of extra work, which to some might seem foreign to this department, that is, of looking up all persons who have applied for a junk collector's license. As these have come from all parts of the city, and in some cases from those who are non-residents, I have been obliged to seek information from the neighboring cities, and it has taken a great deal of the time that usually is spent on scales, weights and measures.

The result of these investigations has been to lessen the number of licenses granted. From the fact that the price for a junk collector's license has been reduced from $5 to $2 has seemed to encourage a large number to engage in this kind of business, many of whom have no scruples and do not hesitate to take the advantage of those from whom they buy, viz., principally the women, who are obliged to take whatever is offered them, be it much or little. In my opinion, there are too many licensed junk collectors in our city. If the price of a license of this kind be placed at a much higher rate, it would have a tendency to keep many from applying for the same, thereby raising the standard of the business to such a degree that more of the better class would engage in it.

Foreigners of a certain nationality who have not been here long enough to acquire any knowledge of the English language, or even to gain a residence, who pay no taxes, and in some instances have had to bring along an interpreter to the City Hall in order to make known their wants, are granted licenses to go all over this city, from house to house, and from early morn until darkness drives them home, their ear-splitting cries can be heard.

Hawkers and pedlars have occupied much of the time of the sealer, more have paid the penalty for violating the law by the use of illegal weights and measures than any year which the present sealer has been in office. It appears to be the aim of some who have no respect for the law or themselves to defraud the public when and wherever they can, and to this class of men the sealer has been obliged to pay particular attention. In many instances where the sealer has suddenly appeared before this

class of men, in order to save themselves from arrest they have abandoned their teams and contents, and secured their safety by fleeing beyond the city limits, and in every case upon examining the wagons, short measures would be found.

It is encouraging to know that an ordinance for the better protection of the public against this class of disreputable men has been framed and is now before the City council.

I would strongly recommend that, before this ordinance is finally passed by the City council, it will be so worded that all hawkers and pedlars will be under the inspection of a competent person who shall be authorized to see that they strictly comply with all requirements of any ordinance which may be enacted.

I am especially grateful to His Honor the Mayor for the interest he has taken in the work of this department, and the support and encouragement I have received at his hands.

For the uniform courtesy extended by all of my associates at the City Hall I am very thankful.

Respectfully submitted,

ALBERT F. ROBERTS,
Sealer of Weights and Measures.

APPENDIX

ORDINANCES

PASSED BETWEEN FEBRUARY 20, 1899, AND FEBRUARY 17, 1900.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED STREETS.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 28 of Chapter 24 of the Revised Ordinances of 1892 is hereby amended by inserting after the word "ashes" in the first line, the words "accumulated from the burning of materials for heating or domestic purposes only."

As amended the Section will read as follows: —

SECT. 28. Whoever desires the removal of ashes accumulated from the burning of materials for heating or domestic purposes only, and other house dirt, not including house offal, shall cause the same to be put in suitable boxes or barrels, and set upon the sidewalk adjoining his premises, and the superintendent of streets shall cause such removal to be made at least once in each week, on stated days for different portions of the city; but such boxes or barrels shall not be placed upon any sidewalk so as unnecessarily to prevent the convenient use thereof by travellers. Wherever there is a convenient driveway into a yard connected with any dwelling-house, the superintendent of streets may, at his convenience and upon reasonable notice, cause the city teams to be driven into such yard, and to remove therefrom the ashes and rubbish before mentioned that may be accumulated therein, at the times hereinbefore specified.

Any person having or leaving after dark any ashes, rubbish, or other refuse on any street shall cause a lighted lantern to be kept thereon during the night. [*Approved, April* 20, 1899.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED AUDITING.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 12, of Chapter 4 of the Revised Ordinances of 1892 is hereby amended in the sixteenth line of the first paragraph by adding after the word "board" the words "except the School Committee."

As amended this Section will read as follows: —

SECT. 12. Executive boards and heads of departments shall approve all accounts and claims in their respective departments, shall keep a record

of all contracts and obligations entered into by them, the dates of the same, with the names of the parties and the amounts of such contracts and obligations when the same are known, and also of the names of the persons whose bills are approved, and of the dates and amounts of said bills. Heads of departments and a majority of each of said boards, except the school committee, shall certify, by their signatures upon such bills, their approval of the same, present them to the appropriate committee of the city council for inspection, and pass them to the auditor on or before the morning of the first day of each month. All bills approved by the school committee shall be certified by the secretary, and at least three members of that board. No bill shall be approved by any board except the school committee, except at a regular meeting of which all members have been notified, and at which there is a majority present.

When any committee of the city council has any doubt concerning the correctness or propriety of a bill presented to it for inspection, it shall, if the same be not satisfactorily explained, indorse its disapproval, and report the fact of such disapproval, with the reasons therefor, to the City Council at the next meeting. [*Approved, April* 20, 1899.

AN ORDINANCE IN AMENDMENT OF SECTION 22 OF CHAPTER 44 OF THE REVISED ORDINANCES OF 1892.

Be it ordained by the City Council of the City of Cambridge, as follows: —

SECTION 1. Section 22 of Chapter 44 of the Revised Ordinances of 1892 is hereby amended by adding thereto the following: "or unnecessarily waste or use the water thereof" so as to read as follows, namely: —

SECTION 22. No person shall place in any drinking fountain, trough, or basin of water, set up or established in any street in the city, for the use of man or beast, any dirt, stone, ashes, rubbish, offal, filth or any other foreign matter: or unnecessarily waste or use the water thereof. [*Approved, June* 29, 1899.

AN ORDINANCE RELATIVE TO THE PENSIONING OF FIREMEN.

Be it ordained by the City Council of the City of Cambridge, as follows: —

SECTION 1. Upon the recommendation of the Chief Engineer of the Fire Department to the City Council or upon his own petition therefor, any fireman in the employ of the city, who, by reason of permanent disability incurred while in the discharge of his duty as fireman, is no longer able to perform active service as such fireman, shall receive such a pension for such a time and to such an amount as upon hearing he may be found entitled thereto.

SECT. 2. Every pension granted to a fireman shall be under the

following restrictions and subject to the following provisions, viz., 1. It shall be payable monthly. 2. It may be increased, diminished or revoked at any time after due notice to the pensioner and a hearing before a committee of the city council.

Sect. 3. The city physician shall examine every person recommended for or applying for such pension, and shall furnish to the city council a written statement in regard to his physical condition so far as it affects permanently his ability to perform active service as a fireman.

Sect. 4. The chief engineer of the fire department shall furnish to the city council a written statement of the circumstances under which his disability was incurred, and the scources of his information in regard to the same.

Sect. 5. The pension granted to the chief engineer of the fire department shall not exceed one-half of the amount of his salary.

The pension granted to any other member of the department shall not exceed forty-three dollars per month in any case. [*Approved July* 19, 1899.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED FIRE.

Be it ordained by the City Council of the City of Cambridge, as follows : —

Section 9 of Chapter 11 of the Revised Ordinances of 1892, as amended by ordinances approved October 28, 1896, July 27, 1898, and September 30, 1898, is hereby further amended by adding the following paragraph : "There shall also be appointed one additional permanent man to each steam fire engine, making seven additional permanent men : and the number of the call men to each steam fire engine shall be correspondingly reduced." [*Approved, October* 12, 1899.

AN ORDINANCE IN RELATION TO THE CITY ELECTRICAL DEPARTMENT.

Be it ordained by the City Council of the City of Cambridge, as follows : —

Section 1. The city electrical department shall be under the charge of the City Electrician.

DUTIES OF CITY ELECTRICIAN.

Sect. 2. The City Electrician shall have the supervision of every wire over, upon, through, or under all streets and over buildings throughout the City ; every wire within a building when such wire is designed to carry an electric light or power current ; also of wires for the transmission of electricity for the purpose of heating or power ; of all poles, conduits and other structures holding, supporting or containing such wires in streets and public places, except parks, commons, bridges, or other public reser-

vations. He shall inspect the condition of all poles, wires, conduits, and cables, their attachments, insulations, supports and appliances.

Sect. 3. He shall require every person or corporation using, operating, or maintaining such fixtures to affix at the points of support, or to a suitable cross-arm, at or to which any such wires or cables containing wires are attached, a tag or mark distinctly designating the owner or user of such poles, wires or cables, except that any such tag or mark shall not be required for the poles, wires or cables of a street railway company used for the transmission of its motive power, nor used for the protection or support of such wires. Whenever any such poles, structures, attachments, insulation, supports or appliances are unsuitable or unsafe, or the tags or marks thereof are insufficient or illegible, he shall order any such person or corporation owning or operating the same to replace them with suitable and safe poles, structures, attachments, insulations, supports or appliances; to repair or remove any wire abandoned for use; every wire which shall be unprovided with a tag or mark, and every post, structure or other appliance not so provided; and if not replaced, repaired or removed forthwith, he shall thereupon proceed to replace, remove or repair the same at the expense of the owner thereof.

Sect. 4. He shall require every person or corporation owning or operating a line of wires over, upon, through or under any streets or over any buildings throughout the city, to use only such wires as are suitable and strong; shall require such wires to be suitably and safely attached to strong and sufficient poles properly painted and insulated at all points of attachment; and when a wire enters a building, and if such wire is other than a wire designed to carry an electric light or power current, shall cause to be attached to it at suitable and convenient points in the circuit calculating to prevent danger from fire, and near the place of entering a building, an appliance calculated to prevent at all times a current of electricity of such intensity or volume as to be capable of injuring electrical instruments or causing fire to enter the building by means of such wire, beyond the point at which such appliance is attached, and shall cause to be suitably insulated every wire within a building when such wire is designed to carry an electric light of power current.

Sect. 5. In case of fire, or whenever the maintenance of any wire or wires may be a menace to life or property, he shall have authority to direct any corporation or person owning, leasing, operating or maintaining any wire or wires, to shut off the electric current therefrom for such a period of time as he may deem to be necessary, or to cause said wire or wires to be cut or removed without notice, and such wire or wires shall not be connected again or replaced without his approval.

Sect. 6. He shall inspect the construction, location and insulation

of wires designed to carry electric light, heat or power current in buildings in process of construction or repair within the limits of the City and the connection of said wires with any electrical circuit. He shall see that all laws, orders, ordinances and regulations relative to wires and conduits, and pole or conduit locations, are strictly enforced.

SECT. 7. He shall have supervision of the fire alarm telegraph, the police signal system, and all other electrical wires and wire systems now or hereafter owned by the City, except in public parks, bridges or other public reservations. He shall purchase wires, apparatus and machinery and all property and appliances connected with the fire alarm, police signal and lamp systems, which may be under his care and control, shall keep the same at all times in good working order, and shall erect, or cause to be erected, all electrical wires and appliances used in connection with said several systems and all electrical wires or lines owned by the City, except such wires or lines as may be under the care of the Bridge, Park or Water Works Departments.

SECT. 8. He shall have the care and oversight of all street lamps and the fixtures thereof throughout the City, and the erection of posts, lamps and fixtures connected and used with the same, except such lamps as may be located on bridges or in parks or other public reservations; shall contract for all materials, superintend the putting up of all posts, lamps and fixtures located by the city council; shall contract for all lights under his control; shall keep an accurate account of the number of lamps which burn gas, or other material, the cost of same, the number of men employed, the wages given, the kind, quality and cost of fixtures, the number of electric lights and the cost and the outages of the same, and all other expenses incurred in his department. He shall annually, in the month of December, present to the City Council a report showing the detailed expenses, the value of the property on hand, the number, kind, quality and cost of lights used by the City, the outages of the same, and such other material facts as relate to the operation of his department.

SECT. 9. He shall see that all meters for gas or electricity furnished to the City, other than to the Bridge, Park and Water Works Departments, are in proper condition, and as often as may be necessary shall test the power of all lights furnished to the City, except to said Bridge, Park or Water Works Departments; and shall see to it that in all particulars, the provisions of any contracts made are strictly performed.

He shall make such examinations and tests, impart such information, and render such assistance as may be in his power to the Bridge, Park and Water Works Departments whenever requested by said Departments.

REGULATIONS AND PROHIBITIONS.

SECT. 10. All wires, appliances and apparatus in the interior of buildings or on private premises which are intended for the transmission of electricity and whether or not connected with an outside circuit shall be properly and safely constructed, placed, arranged, attached, insulated, covered, changed and maintained by the person or corporation using the same. Such person or corporation shall allow the City Electrician at all reasonable times free access to such wires, appliances and apparatus, and shall notify said City Electrician of any intention to construct, place, arrange, attach, insulate, change or maintain any such wires, appliances, and apparatus before they are covered or enclosed, or connected with any outside circuit.

SECT. 11. Every person or corporation owning, operating or leasing any poles, wires, ducts, conduits, manholes, electrical structures or appliances within the public ways of the City of Cambridge shall comply with all rules and requirements of the Board of Aldermen with respect to the quality of poles, wires, ducts, conduits, manholes, structures and other appliances and with all rules and requirements of said Board with respect to their installation, removal and repair, and shall, at all reasonable times, give to the City Electrician access to such poles, wires, ducts, conduits, manholes, structures, appliances and apparatus. No line or wire shall be attached to any pole by means of brackets or other side fixtures, nor shall the wires or lines of more than one party be placed on the same cross-arm.

No corporation or persons maintaining or operating a wire or line of wires for the transmission of electricity shall affix to or place upon any pole, structure, or fixture owned by it or them and now erected or that may be erected hereafter, any additional wire or wires, except upon a written permission of the City Electrician.

SECT. 12. No person or corporation shall permit any unused piece of coil or loose end of wire to be left on the surface of any public way or sidewalk, or attached to any cross-arm, pole or other structure.

SECT. 13. Whenever the City Electrician shall request, any person or corporation operating electric or other wires, poles, ducts, conduits or manholes upon, over, through or under any public way or over any building, shall, within fifteen days, furnish a plan, showing the number and location of its poles, the cross-arms on each, the number of wires or cables thereto attached, or contained therein, the particular locations of all its ducts, conduits and manholes, and the usage to which the respective ducts in said conduits are, and hereafter may be put, with specifications of the average volts charged and current used, the tested strength, the kind and number of lamps or motors connected with any electrical circuit, and

other electrical appliances, and, in general, the method of installation, operation, maintenance and repair. Said plan shall be in form and size agreeable to the City Electrician.

SECT. 14. No person except a police officer, fireman, or employee in the City Electrical Department in the discharge of his duties, shall open, attempt to open, or cause to be opened any of the police or fire alarm signal boxes, except in case of fire; no person shall interfere, tamper, or meddle with, break, cut, injure or deface any such boxes, any part or parts thereof, or anything connected therewith; and no person shall put any bill or placard upon such signal box, pole or structure.

SECT. 15. No person or corporation shall construct, erect, lay or maintain in any public way any pole, duct, conduit, manhole or other structure to support or contain wires or lines for the transmission of intelligence by electricity or otherwise or for the purposes of light, heat, and power, except by order of the Board of Aldermen previously obtained, in which the exact location of each shall be duly set forth.

SECT. 16. No wire, line or apparatus used for the transmission of electricity for any purpose shall be attached by cross-arms or otherwise to any tree in any public way except by consent in writing of the Board of Park Commissioners previously obtained, nor shall any such wire, line or apparatus be attached as aforesaid to any public building, structure, or fixture of any kind, in any public way or grounds, except in public Parks, Bridges and other public reservations, except by order of the Board of Alderman previously obtained, in which order such building, structure or fixture shall be duly described; provided, however, that the aforesaid regulation shall not apply to wires, lines or apparatus owned or used by the City.

SECT. 17. Whenever permission shall be granted by the Board of Aldermen to erect and maintain poles, or to construct and maintain ducts, conduits, manholes or other fixtures in the public ways to support, hold or contain lines or wires for the transmission of electricity, the party to whom such permission is granted shall, within thirty days from the date of the order granting such permission, file in the office of the city clerk a written acceptance without reservation of the location of such poles, ducts, conduits, manholes or other fixtures and of all the conditions, terms and provisions contained in the order and the ordinances of the City and future amendments thereof, and agreeing to carry out, observe, perform, and be subject to the same; and in default of such written acceptance and agreement, the permission and grant of location shall be void. Such grant and permission shall likewise be void and deemed revoked unless within six months after the date of the order the poles, ducts, conduits, manholes and other fixtures shall have been erected or

constructed and completed; and, unless within six months after such completion, the electric lines shall be constructed and put in operation. Whenever the operation of the electric lines upon or in any location granted shall be discontinued for six months, the grant shall cease and be of no further effect.

Sect. 18. All poles in sidewalks shall be set upon the outer edge thereof, and, wherever there are curbstones, placed within four inches of the inner edge of the curbstones. Poles for telegraph, telephone, and electric light lines shall be of hard pine, square at the surface of the ground, and planed and chamfered. Poles for support of trolley, guard, span or feed wires of the Street Railway System shall be cylindrical iron poles, unless otherwise ordered by the Board of Aldermen.

Sect. 19. All permissions granted by the Board of Aldermen to erect and maintain poles, or to construct ducts, conduits, manholes or other fixtures for electrical lines, in the public ways, may at any time be revoked by the Board of Aldermen, either in whole or in part, and the said Board may order the removal of such poles, ducts, conduits, manholes, fixtures, wires and lines as it may deem necessary; and whenever any poles, ducts, conduits, manholes, fixtures, lines and wires are so ordered to be removed, such removal shall be done by and at the expense of the owner, in conformity with the order, within thirty days after notice, and, if not so removed, the Board of Aldermen may cause the removal to be done and the expense thereof to be repaid to the City by the owner.

Sect. 20. No person or corporation shall attach any wire or line for the transmission of electricity for any purpose, except the lines and wires owned or used by the City, to any pole already erected for the use of another corporation or person, except by consent of the owner and the order of the Board of Aldermen previously obtained, in which order such pole shall be duly described.

Sect. 21. To all poles erected and maintained by any person or corporation under the provisions of this ordinance, the City may at any time attach wires for its own use.

Sect. 22. All petitions presented to the Board of Aldermen for permission to erect poles to support wires or lines or to construct conduits for the transmission of electricity for any purpose, shall be accompanied with, or contain a statement of, the exact location of each pole proposed to be erected, or conduit to be constructed, and shall be accompanied with duplicate plans showing said locations, said plans to be in form and size agreeable to the City Clerk. A hearing upon every such petition shall be given to all parties interested. Notice of the filing of every such petition, and of the hearing thereon, shall be

given by the petitioner or petitioners, to owners or occupants of land along the public ways upon which locations are prayed for, which notice shall state briefly the public ways, or the parts thereof to which such petition relates.

SECT. 23. The location of all poles, ducts, conduits or manholes erected or used by permission of the Board of Aldermen, to support or contain wires and lines for the transmission of electricity, shall be changed and altered whenever deemed necessary by said Board by the owner or person using the same at his expense without any unnecessary delay, and if not so changed or altered, it shall be done by the City Electrician at the expense of said owner or person.

SECT. 24. Whenever the Board of Aldermen shall deem it proper, all persons or corporations mentioned in Section 11 of this ordinance, shall gather and place in ærial cable, lines and wires to the number of fifty or more in any public way, within such time, at such height and in such manner as said Board may designate.

SECT. 25. No public way or bridge shall be torn up or disturbed for the purpose of laying, repairing, changing or removing lines, wires, ducts, conduits or manholes, or erecting, altering or removing poles or other fixtures used for carrying electric lines or wires, without a license first obtained therefor. No formal license shall be necessary to sanction the temporary removal of covers to manholes for the purpose of removing or repairing lines, wires and cables. Whenever a manhole is opened, the person or corporation by whose authority the same is done shall place a suitable metallic guard rail around the opening, with a signal flag, at least one foot square, displayed therefrom.

Whenever any opening or disturbance is made in any public way or bridge for any purpose, such public way or bridge shall be promptly restored by the person or corporation owning or operating the lines, wires, ducts, conduits or manholes, or making such repairs, to a condition satisfactory to the Superintendent of Streets, and shall be kept and maintained in such condition by such person or corporation for two years thereafter; and, if not immediately so restored, kept and maintained, the same may be done by the City at the expense of such person or corporation.

SECT. 26. Whenever the City shall construct, enlarge, relocate, repair, or alter the streets, sewers, water pipes or other public works, in streets, ways and bridges where conduits and wires are laid, which in the opinion of the Board of Aldermen may require the moving or changing the location of said conduits and the fixtures appertaining thereto, or the repairing thereof, said removing, changing and repair shall be done without delay at the expense of the person or corporation owning or operating the same.

Sect. 27. Whenever underground conduits have once been laid in the streets and ways of the city, they shall not be removed, relocated or changed, without permission from the Board of Aldermen.

Sect. 28. In all underground conduits and manholes sufficient and necessary space shall be reserved, free of expense, for wires belonging to or to be used by the City, and said conduits shall at all times be accessible to the City for the purpose of putting in, taking out and repairing its wires.

Sect. 29. Every person or corporation constructing, maintaining or operating a telegraphic, telephonic, or other electrical line in the City, shall execute a bond, with satisfactory surety, in a penal sum of not less than ten thousand dollars, and of form satisfactory to the City Solicitor, conditioned to indemnify and save harmless the City against all damages, costs, expenses and losses whatsoever, to which it may be subjected in consequence of the acts and neglects of such person and corporation, their agents, officers and servants, and any and all persons acting by, through, or under such person or corporation, and in any manner arising from, or growing out of the use and transmission of electricity, the privileges permitted by the City, and the construction, maintenance, operation, and use of lines, wires, cables, conduits, poles, structures, constructions, fixtures and apparatus; and also to fulfil all their agreements with the City, all the orders, conditions and obligations imposed by the Board of Aldermen, and all obligations and duties required by law, and by this chapter and every other ordinance, and all additions and amendments relating thereto.

A new bond of like import, and with new surety, may at any time be required by the City, which new bond shall be a strengthening bond, unless the surety on former bonds is expressly released from further liability by vote of the Board of Aldermen.

Sect. 30. All locations hereafter granted shall be subject to the condition that any person or corporation to whom locations shall be granted, shall give any other person or corporation permission to use its poles, ducts, conduits, manholes or other electrical appliances or apparatus whenever ordered so to do by the Board of Aldermen on payment of a reasonable rental.

Sect. 31. Except as otherwise provided by law, any person violating any provision of this Chapter shall be subject to a penalty of not exceeding twenty dollars for each and every offence.

Sect. 32. This ordinance, so far as its provisions are the same in effect as those of previously existing ordinances, shall be construed as a continuation of those ordinances; it shall not affect any act done, any right accruing, any penalty incurred or any suit, prosecution or proceeding

pending. Subject to the aforesaid limitations, Chapters 14 and 16 of the Revised Ordinances of 1892, all ordinances amendatory thereof, and supplementary thereto, are hereby repealed.

Provided, however, that the tenure of office of the Inspector of Wires and of the Superintendent of Lamps shall continue until the appointment and confirmation of the City Electrician and that, until such appointment and confirmation, said Inspector of Wires and Superintendent of Lamps shall have all the powers, perform all the duties and be subject to all the responsibilities of said City Electrician, as defined in this ordinance. [*Approved October* 24, 1899.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "GENERAL REGULATIONS FOR STREETS, COMMONS, RESERVOIRS AND OTHER PUBLIC PLACES."

Be it Ordained by the City Council of the City of Cambridge as follows: —

Section 43 of Chapter 44 of the Revised Ordinances of 1892, is hereby amended by inserting in the second line after the word "works" the words "for the purpose of skating," also by striking out all after the word "thereon" in the third line. As amended the section will read as follows: —

SECT. 43. No person shall go upon the ice of Fresh Pond, or any other reservoir of the water works for the purpose of skating, or place or use a sled, ice-boat, sleigh or vehicle thereon. [*Approved Nov.* 10, 1899.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE IN RELATION TO DUTIES AND SALARIES.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 12 of Chapter 27, of the Revised Ordinances of 1892, is hereby amended by striking out the entire section, and inserting in place thereof the following: —

SECT. 12. No officer or board shall make any contract or purchase in behalf of the City, involving an expenditure of more than three hundred dollars, without advertising for proposals therefor, unless authorized by vote of two-thirds of each branch of the City Council. [*Approved Dec.* 29, 1899.

MAYORS OF THE CITY OF CAMBRIDGE

(From 1846 to 1900 Inclusive)

James D. Green	From May,	1846,	to April,	1848
Sidney Willard	" April,	1848,	to April,	1851
George Stevens	" April,	1851,	to April,	1853
James D. Green	" April,	1853,	to April,	1854
*Abraham Edwards	" April,	1854,	to January,	1855
Zebina L. Raymond	" January,	1855,	to January,	1856
John Sargent	" January,	1856,	to January,	1860
†James D. Green	" January,	1860,	to July 24,	1861
‡Charles Theo. Russell	" July 31,	1861,	to January,	1863
George C. Richardson	" January,	1863,	to January,	1864
Zebina L. Raymond	" January,	1864,	to January,	1865
J. Warren Merrill	" January,	1865,	to January,	1867
Ezra Parmenter	" January,	1867,	to January,	1868
Charles H. Saunders	" January,	1868,	to January,	1870
Hamlin R. Harding	" January,	1870,	to January,	1872
Henry O. Houghton	" January,	1872,	to January,	1873
Isaac Bradford	" January,	1873,	to January,	1877
Frank A. Allen	" January,	1877,	to January,	1878
Samuel L. Montague	" January,	1878,	to January,	1880
James M. W. Hall	" January,	1880,	to January,	1881
James A. Fox	" January,	1881,	to January,	1885
William E. Russell	" January,	1885,	to January,	1889
Henry H. Gilmore	" January,	1889,	to January,	1891
Alpheus B. Alger	" January,	1891,	to January,	1893
William A. Bancroft	" January,	1893,	to January,	1897
Alvin F. Sortwell	" January,	1897,	to January,	1899
Edgar R. Champlin	". January,	1899.	Now in office.	

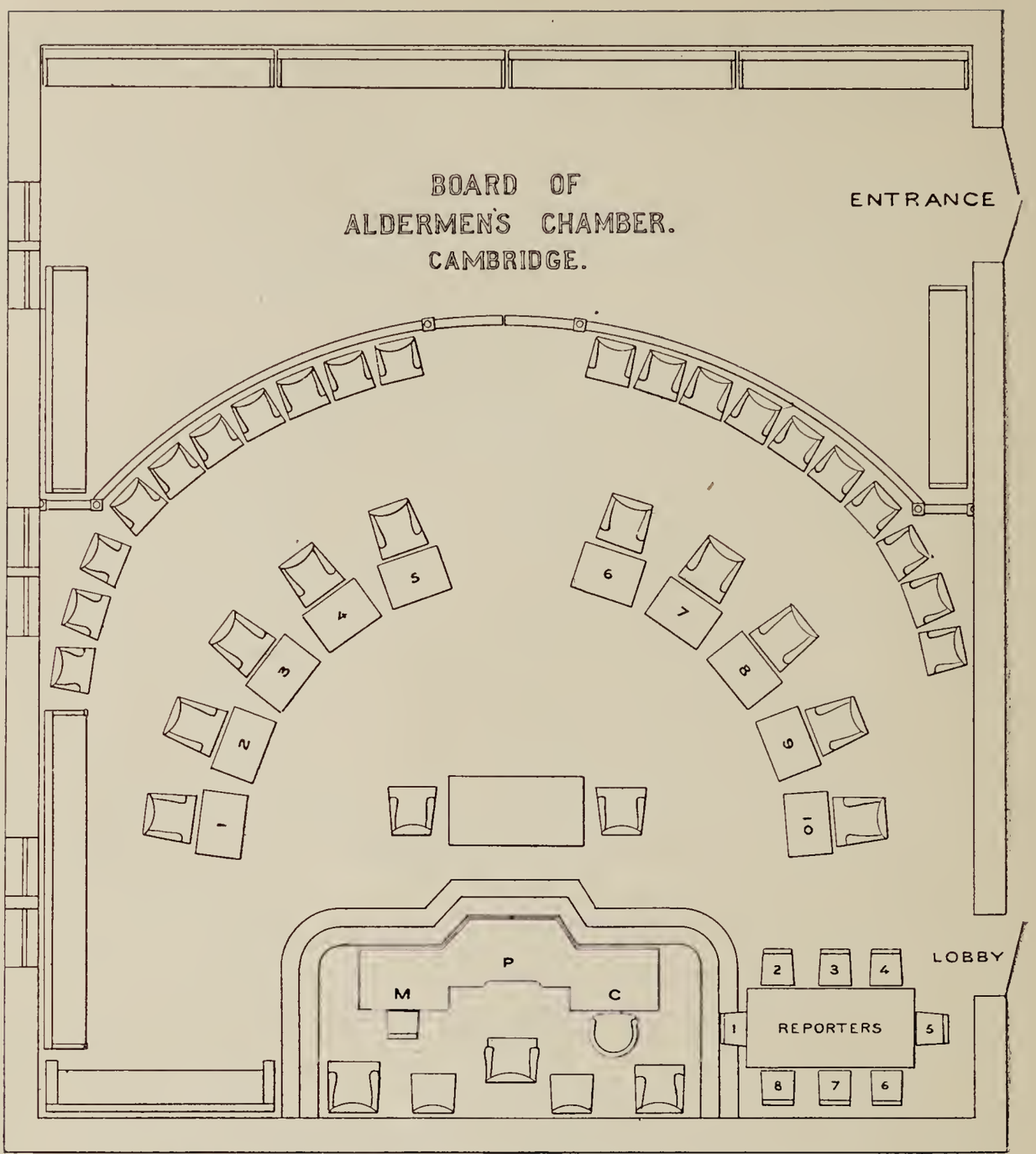
*Municipal year changed. †Resigned. ‡First elected by the City Council.

PRESIDENTS OF THE BOARD OF ALDERMEN

1888 Edward W. Hincks.
1889 John H. Corcoran.
1890 Alvin F. Sortwell.
1891 William A. Bancroft.
1892 William A. Bancroft.
1893 John R. Fairbairn.
1894 John G. Thorogood.
1895 John R. Fairbairn.
1896 John R. Fairbairn.
1897 Russell Bradford.
1898 Russell Bradford.
1899 Walter C. Wardwell.
1900 Walter C. Wardwell.

PRESIDENTS OF THE COMMON COUNCIL

1846 Isaac Livermore.
1847 John Sargent.
1848 John C. Dodge.
1849 Samuel P. Heywood.
1850 Samuel P. Heywood.
1851 John S. Ladd.
1852 John Sargent.
1853 John Sargent.
1854 John C. Dodge.
1855 Alanson Bigelow.
1856 Ezra Ripley. Resigned January 31.
1856 George S. Saunders. Elected January 31.
1857 George S. Saunders.
1858 James C. Fisk.
1859 James C. Fisk.
1860 Hamlin R. Harding.
1861 Hamlin R. Harding.
1862 Jared Shepard. Resigned September 17.
1862 Knowlton S. Chaffee. Elected September 24.
1863 George S. Saunders.
1864 George S. Saunders.
1865 John S. March.
1866 John S. March.
1867 Marshall T. Bigelow.
1868 Knowlton S. Chaffee. Resigned February 4.
1868 Henry W. Muzzey. Elected February 4.
1869 Henry W. Muzzey.
1870 Joseph H. Converse.
1871 Joseph H. Converse.
1872 Alvaro Blodgett.
1873 Alvaro Blodgett. Resigned June 17.
1873 Francis H. Whitman. Elected June 17.
1874 George F. Piper.
1875 George F. Piper.
1876 Frank A. Allen.
1877 Perez G. Porter.
1878 George S. Saunders.
1879 George S. Saunders.
1880 Charles Walker.
1881 Charles Walker.
1882 George H. Howard.
1883 George H. Howard.
1884 George H. Howard.
1885 Cornelius G. H. Bennink.
1886 John H. Corcoran.
1887 John H. Corcoran.
1888 Alvin F. Sortwell.
1889 Edward A. Bingham.
1890 Edward A. Bingham.
1891 Edward C. Wheeler.
1892 Herbert A. Chase.
1893 J. Henry Russell.
1894 Charles M. Conant.
1895 John L. Odiorne.
1896 John L. Odiorne.
1897 Albert S. Apsey.
1898 George E. Saunders.
1899 William F. Brooks.
1900 John D. Merrill.



KEY TO ALDERMEN'S CHAMBER

CITY HALL, CAMBRIDGE

1900

P—Walter C. Wardwell, *President.*

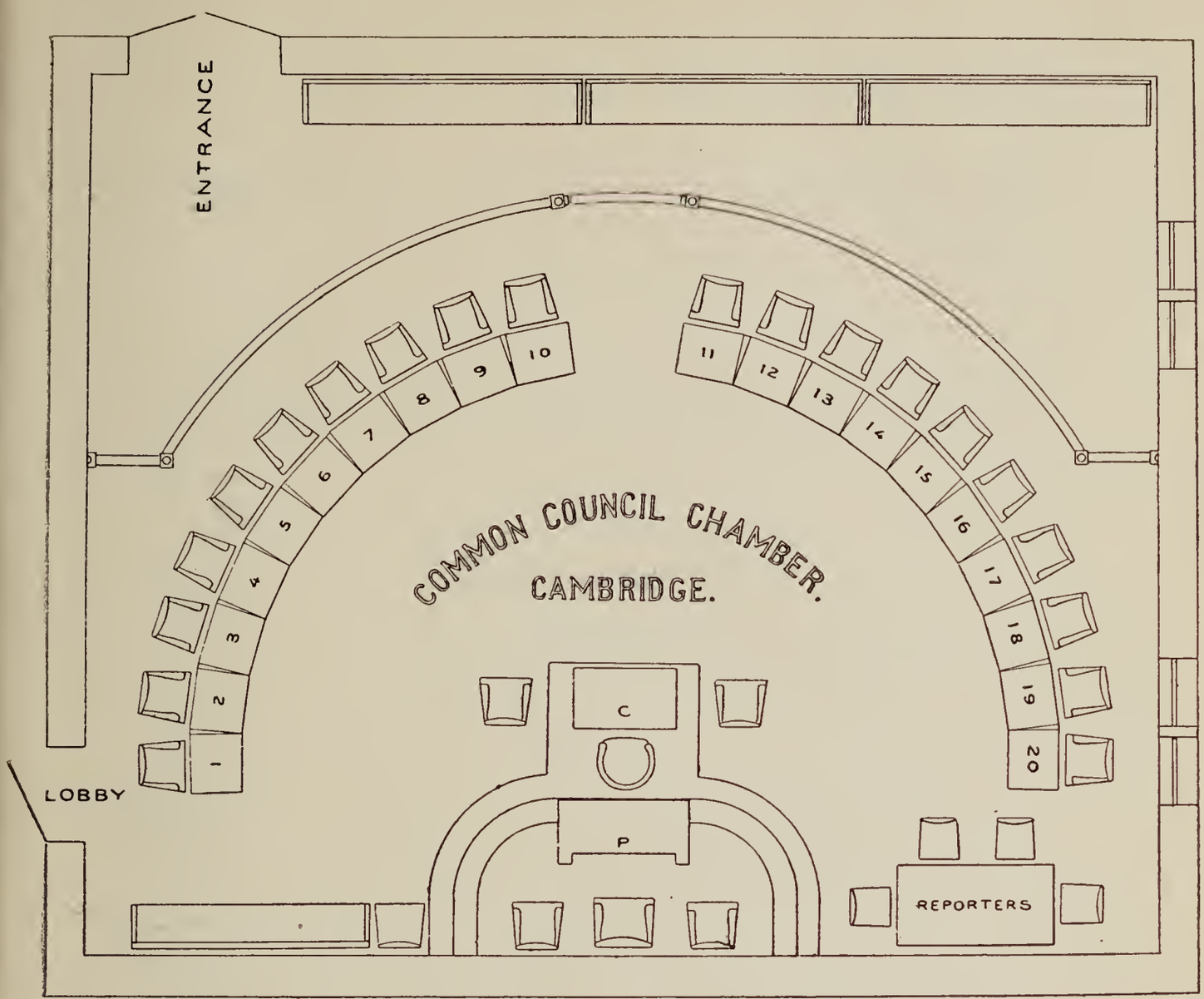
1	Alderman	McLean.	6	Alderman	Brooks.
2	"	Saunders.	7	"	Carstein.
3	"	Shea.	8	"	Perkins.
4	"	Doyle.	9	"	Donovan.
5	"	Long.	10	"	Ahern.

C—Edward J. Brandon, *City Clerk.*

M—Francis L. Pratt, *City Messenger.*

Reporters:

1	Boston	Globe.	5	Boston	Herald.
2	Cambridge	Tribune.	6		
3	"	Press.	7	Cambridge	Chronicle.
4	"	Times.	8	"	News.



KEY TO COMMON COUNCIL CHAMBER

CITY HALL, CAMBRIDGE

1900

P—JOHN D. MERRILL, *President.*

1	Councilman	Bird.	11	Councilman	Good.
2	"	Brown.	12	"	Malley.
3	"	Wadden.	13	"	Sharkey.
4	"	Gilligan.	14		
5	"	Rhoades.	15	"	Danskin.
6	"	Beunke.	16	"	Clark.
7	"	Lewis.	17	"	Hall.
8	"	Rounds.	18	"	Spalding.
9	"	Hill.	19	"	Lehan.
10	"	Bell.	20	"	Barrett.

C—Edward A. Counihan, *Clerk.* Frank T. Evans, *Page.*

Reporters:

Cambridge Tribune. Cambridge Chronicle.
" Press. " Times.

GOVERNMENT OF THE CITY OF CAMBRIDGE, 1900

Mayor

HON. EDGAR R. CHAMPLIN, 8 Dana Street.

Board of Aldermen

President.

WALTER C. WARDWELL.

Ward One.

WILLIAM F. BROOKS	35 Aberdeen Avenue.
GEORGE E. SAUNDERS	5 Concord Avenue.
WALTER C. WARDWELL	465 Broadway.

Ward Two.

JEREMIAH F. DONOVAN	120 Inman Street.
WILLIAM E. DOYLE	1501 Cambridge Street.
ALBERT B. LONG	5 Ellsworth Park.

Ward Three.

JOHN J. AHERN	62 Fifth Street.
JOHN T. SHEA	119 Third Street.

Ward Four.

HAMILTON H. PERKINS	126 Magazine Street.

Ward Five.

HANS L. CARSTEIN	45 Cogswell Avenue
ISAAC MCLEAN	2218 Massachusetts Avenue.

Clerk.

EDWARD J. BRANDON.

Messenger.

FRANCIS L. PRATT.

Regular Meetings on Tuesday Evenings at 8 o'clock.

Common Council

President.

JOHN D. MERRILL.

Ward One.

STOUGHTON BELL	164 Brattle Street.
JAMES D. HILL	29 Ash Street.
JOHN D. MERRILL	12 Mount Auburn Street.
THORNDIKE SPALDING	75 Sparks Street.

Ward Two.

WILLIAM W. BIRD	13 Bigelow Street.
JAMES J. MALLEY	160 Willow Street.
HERBERT A. RHOADES	26 Inman Street.
JOSEPH E. SHARKEY	259 Elm Street.
WILLIAM M. WADDEN	125 Hampshire Street.

Ward Three.

JAMES T. BARRETT	8 Parnell Street.
JAMES A. BROWN	106 Sixth Street.
FREDERICK A. GILLIGAN	145 Otis Street.
HENRY F. LEHAN	26A Fourth Street.

Ward Four.

FRED L. BEUNKE	225 Franklin Street.
EDWARD E. CLARK	346 Brookline Street.
JOHN F. DANSKIN	55 River Street.
TIMOTHY W. GOOD	253 Putnam Avenue.
WILLIAM J. ROUNDS	351 Pearl Street.

Ward Five.

ALBERT H. HALL	30 Mount Pleasant Street.
WILLIAM H. LEWIS	55 Frost Street.

Clerk.

EDWARD A. COUNIHAN.

Page.

FRANK T. EVANS.

Regular Meetings on Tuesday Evenings at 8 o'clock.

COMMITTEES OF THE CITY COUNCIL

JOINT STANDING COMMITTEES.

Accounts. Aldermen Brooks and Long; Councilmen Malley, Danskin and Barrett.

Almshouse. Aldermen Carstein and Doyle; Councilmen Brown, Danskin and Sharkey.

Assessors' Department. Aldermen Ahern; Councilmen Hill and Rounds.

City Engineering. Aldermen Shea and Long; Councilmen Lewis, Bird and Barrett.

Claims. President Wardwell, Aldermen Doyle, McLean and Brooks; President Merrill, Councilmen Spalding, Beunke, Lewis, Lehan and Rhoades.

Finance. President Wardwell, Aldermen Saunders, Ahern and Perkins; President Merrill, Councilmen Wadden, Hill, Hall, Beunke and Gilligan.

Fire Department. Aldermen Donovan and Perkins; Councilmen Wadden, Danskin and Gilligan.

Health. Aldermen Long and Perkins; Councilmen Spalding, Good and Malley.

Legislative Matters. President Wardwell, Aldermen Shea and Carstein; President Merrill, Councilmen Spalding, Lehan and Rhoades.

Ordinances. Aldermen Saunders and Long; Councilmen Spalding, Rhoades and Bird.

Parks. Aldermen Ahern and Brooks; Councilmen Hill, Hall and Clark.

Printing. Aldermen Brooks and Doyle; Councilmen Bell, Good and Sharkey.

Public Instruction. Aldermen Saunders and Long; Councilmen Danskin, Bell and Sharkey.

Public Property. Aldermen Ahern and McLean; Councilmen Bell, Malley and Rounds.

Roads and Bridges. Aldermen Shea and Donovan; Councilmen Rounds, Brown and Good.

Rules and Orders. Aldermen Carstein and Long; Councilmen Lewis, Lehan and Clark.

Water Supply. Aldermen Donovan and Brooks; Councilmen Brown, Wadden and Lewis.

Wires and Lamps. Alderman Carstein and Long; Councilmen Barrett, Clark and Bird.

STANDING COMMITTEES OF THE BOARD OF ADLERMEN.

Bonds. Aldermen Shea, Carstein and Long.

Claims. President Wardwell, Aldermen Doyle, McLean and Brooks.

Elections and Returns. Aldermen Brooks, Shea and Perkins.

Fire Department. Aldermen Donovan, Perkins and Ahern.

Health. Aldermen Long, Perkins and Saunders.

Licenses. Aldermen Carstein, Doyle and Saunders.

Parks. Aldermen Ahern, Brooks and Doyle.

Police. Aldermen Shea, Long and Brooks.

Roads and Bridges. Aldermen Shea, Donovan and McLean.

Rules and Orders. Aldermen Carstein, Long and Brooks.

Sewers. Aldermen McLean, Long and Doyle.

Soldiers' Aid. Aldermen Doyle, Ahern, Saunders, Perkins and Carstein.

Street Railways. Aldermen McLean, Saunders and Shea.

STANDING COMMITTEES OF THE COMMON COUNCIL.

Bills in the Second Reading. Councilmen Lehan, Hall and Sharkey.

Elections and Returns. Councilmen Rhoades, Bird and Malley.

Enrolled Ordinances. Councilmen Spalding, Clark and Gilligan.

JOINT SPECIAL COMMITTEES.

Consideration of Matters referred from last City Council. Aldermen Ahern, Doyle and McLean; Councilmen Danskin, Malley and Hill.

Publication of Mayor's Inaugural Address. Aldermen Long and Saunders; Councilmen Bell, Brown and Sharkey.

Recommendations in Mayor's Inaugural Address. Aldermen Saunders and Doyle; Councilmen Bell, Bird and Hill.

Apportionment of Members of Common Council. Aldermen Doyle, Saunders, McLean and Perkins; Councilmen Hall, Wadden, Beunke, Spalding and Barrett.

Observance of the 125th Anniversary of the event of Washington's taking command of the American Army. President Wardwell, Aldermen Shea and Saunders; President Merrill; Councilmen Lewis and Bird.

Municipal Bath House. Aldermen Ahern, Carstein and Donovan; Councilmen Bell, Brown, Good, Wadden and Hall.

New Cambridge Bridge. Aldermen Perkins and Long; Councilmen Beunke, Malley and Lehan.

Central Fire Alarm Station. Committees on Fire Department and on Wires and Lamps.

Amendments to City Charter. President Wardwell, Aldermen Shea, Saunders and Doyle; President Merrill, Councilmen Spalding, Brown, Lewis, Clark and Rhoades.

Clay Lands. Aldermen Carstein and Donovan; Councilmen Lewis, Hill and Rhoades.

SPECIAL COMMITTEES OF BOARD OF ALDERMEN.

Consideration of Matters referred from last Board of Aldermen. Aldermen Ahern, Doyle and McLean.

Consideration of appointing a Reading Clerk. Aldermen Shea, Saunders and Doyle.

Licensing Hawkers and Peddlers. Committees on Police and on Licenses.

MEMBERS OF THE CITY COUNCIL, WITH THE COMMITTEES UPON WHICH THEY HAVE BEEN APPOINTED.

President Wardwell. Claims (Joint and of Aldermen), Finance, Legislative Matters, City Charter, 125th Anniversary of Washington's Command.

Alderman Ahern. Assessors' Department, Finance, Parks (Joint and of Aldermen), Public Property, Fire Department (of Aldermen), Soldiers' Aid, Consideration of Matters referred from last City Council, Municipal Bath House, Consideration of Matters referred from last Board of Aldermen.

Alderman Brooks. Accounts, Claims (Joint and of Aldermen), Parks (Joint and of Aldermen), Printing, Water Supply, Elections and Returns, Police, Rules and Orders (of Aldermen), Licensing Hawkers and Peddlers.

Alderman Carstein. Almshouse, Wires and Lamps, Legislative Matters, Rules and Orders (Joint and of Aldermen), Bonds, Licenses, Soldiers' Aid, Municipal Bath House, Central Fire Alarm Station, Clay Lands, Licensing Hawkers and Peddlers.

Alderman Donovan. Fire Department (Joint and of Aldermen), Roads and Bridges (Joint and of Aldermen), Water Supply, Municipal Bath House, Central Fire Alarm Station, Clay Lands.

Alderman Doyle. Almshouse, Claims (Joint and of Aldermen), Printing, Licenses, Parks (of Aldermen), Sewers, Soldiers' Aid, Consideration of Matters referred from last City Council, Recommendations in

Mayor's Inaugural Address, Apportionment of Members of Common Council, City Charter, Consideration of Matters referred from last Board of Aldermen, Consideration of appointing a Reading Clerk, Licensing Hawkers and Peddlers.

Alderman Long. Accounts, City Engineering, Health (Joint and of Aldermen), Wires and Lamps, Ordinances, Public Instruction, Rules and Orders (Joint and of Aldermen), Bonds, Police, Sewers, Publication of Mayor's Inaugural Address, New Cambridge Bridge, Central Fire Alarm Station, Licensing Hawkers and Peddlers.

Alderman McLean. Claims (Joint and of Aldermen), Public Property, Sewers, Roads and Bridges (of Aldermen), Street Railways, Consideration of Matters referred from last City Council, Apportionment of Members of Common Council, Consideration of Matters referred from last Board of Aldermen.

Alderman Perkins. Finance, Fire Department (Joint and of Aldermen), Health (Joint and of Aldermen), Elections and Returns, Soldiers' Aid, Apportionment of Members of Common Council, New Cambridge Bridge, Central Fire Alarm Station.

Aldermen Saunders. Finance, Ordinances, Public Instruction, Health (of Aldermen), Licenses, Soldiers' Aid, Street Railways, Publication of Mayor's Inaugural Address, Recommendations in Mayor's Inaugural Address, Apportionment of Members of Common Council, 125th Anniversary of Washington's Command, City Charter, Consideration of appointing a Reading Clerk, Licensing Hawkers and Peddlers.

Aldermen Shea. City Engineering, Legislative Matters, Roads and Bridges (Joint and of Aldermen), Bonds, Elections and Returns, Police, Street Railways, 125th Anniversary of Washington's Command, City Charter, Consideration of appointing a Reading Clerk, Licensing Hawkers and Peddlers.

President Merrill. Claims, Finance, Legislative Matters, 125th Anniversary of Washington's Command, City Charter.

Councilman Barrett. Accounts, City Engineering, Wires and Lamps, Apportionment of Members of Common Council, Central Fire Alarm Station.

Councilman Bell. Printing, Public Instruction, Public Property, Publication of Mayor's Inaugural Address, Recommendations in Mayor's Inaugural Address, Municipal Bath House.

Councilman Beunke. Claims, Finance, Apportionment of Members of Common Council, New Cambridge Bridge.

Councilman Bird. City Engineering, Wires and Lamps, Ordinances, Elections and Returns, Recommendations in the Mayor's Inaugural Address, 125th Anniversary of Washington's Command, Central Fire Alarm Station.

Councilman Brown. Almshouse, Roads and Bridges, Water Supply, Publication of Mayor's Inaugural Address, Municipal Bath House, City Charter.

Councilman Clark. Wires and Lamps, Parks, Rules and Orders, Enrolled Ordinances, Central Fire Alarm Station, City Charter.

Councilman Danskin. Accounts, Almshouse, Fire Department, Public Instruction, Consideration of Matters referred from last City Council, Central Fire Alarm Station.

Councilman Gilligan. Finance, Fire Department, Enrolled Ordinances, Central Fire Alarm Station.

Councilman Good. Health, Printing, Roads and Bridges, Municipal Bath House.

Councilman Hall. Finance, Parks, Bills in the Second Reading, Apportionment of members of Common Council, Municipal Bath House.

Councilman Hill. Assessors' Department, Finance, Parks, Consideration of Matters referred from last City Council, Recommendations in Mayor's Inaugural Address, Clay Lands.

Councilman Lehan. Claims, Legislative Matters, Rules and Orders, Bills in the Second Reading, New Cambridge Bridge.

Councilman Lewis. City Engineering, Claims, Rules and Orders, Water Supply, 125th Anniversary of Washington's Command, City Charter, Clay Lands.

Councilman Malley. Accounts, Health, Public Property, Elections and Returns, Consideration of Matters referred from last City Council, New Cambridge Bridge.

Councilman Rounds. Assessors' Department, Public Property, Roads and Bridges.

Councilman Rhoades. Claims, Legislative Matters, Ordinances, Elections and Returns, City Charter, Clay Lands.

Councilman Sharkey. Almshouse, Printing, Public Instruction, Bills in the Second Reading, Publication of Mayor's Inaugural Address.

Councilman Spalding. Claims, Health, Legislative Matters, Ordinances, Enrolled Ordinances. Apportionment of Members of Common Council, City Charter.

Councilman Wadden. Finance, Fire Department, Water Supply, Apportionment of Members of Common Council, Municipal Bath House, Central Fire Alarm Station.

DEPARTMENTS AND BOARDS

EXECUTIVE DEPARTMENT.

EDGAR R. CHAMPLIN, . . . *Mayor.*
Edward A. Counihan, . . . *Mayor's Clerk.*
Office Hours: 8 A. M. to 3 P. M.
Office, Rooms 17 and 18, City Hall. Telephone 463.

CITY CLERK DEPARTMENT.

EDWARD J. BRANDON, . . . *City Clerk.*
Albert M. Pear, ... *Assistant City Clerk.*
Office Hours: 8 A. M. to 3 P. M.
Office, Rooms 8 and 9, City Hall. Telephone 419.

TREASURY DEPARTMENT.

WILLIAM W. DALLINGER, *City Treasurer and Collector of Taxes.*
Office Hours: 8 A. M. to 2 P. M.
Office, Rooms 3 and 4, City Hall. Telephone 602.

AUDITING DEPARTMENT.

HARRY T. UPHAM, . . . *City Auditor.*
Office Hours: 8 A. M. to 2 P. M.
Office, Rooms 1 and 2, City Hall. Telephone 602.

CLERK OF COMMITTEES DEPARTMENT.

JOHN MCDUFFIE, ... *Clerk of Committees.*
Office Hours: 8 A. M. to 3 P. M.
Office, Room 16, City Hall. Telephone 125.

CITY MESSENGER DEPARTMENT.

FRANCIS L. PRATT, . . . *City Messenger.*
Office Hours: 8 A. M. to 5 P. M.
Office, Room 11, City Hall. Telephone 507.

LAW DEPARTMENT.

GILBERT A. A. PEVEY, . . *City Solicitor.*
Office Hours (at City Hall): Saturdays, 8 A. M. to 12 M.
Office, Room 17, City Hall. Telephone 463.
Boston Office, 5 Tremont Street. Telephone 1071, Haymarket.

ENGINEERING DEPARTMENT.

Lewis M. Hastings, . . . *City Engineer.*
Theodore L. Pike, . . . *Supt. of Sewers.*
Office Hours: 8 A. M. to 5 P. M.
Office, Rooms 30 and 31, City Hall. Telephone 471.

FIRE DEPARTMENT.

Thomas J. Casey, . . . *Chief.*
Office Hours: 9 to 10 A. M.
Office, Room 23, City Hall. Telephone 507.

INSPECTION, ETC., OF BUILDINGS DEPARTMENT.

William H. Gray, *Supt. of Public Buildings and Inspector of Buildings.*
Office Hours: 8 A. M. to 2 P. M.
Office, Room 20, City Hall. Telephone 125.

HEALTH DEPARTMENT — BOARD OF HEALTH.

E. Edwin Spencer, M. D. . . *Chairman.*
Term, three years.
E. Edwin Spencer, M. D. . . Term expires 1901.
William Rodman Peabody . Term expires 1902.
Charles Harris . . . . Term expires 1903.

James B. Soper . . . . *Clerk.*
Edwin Farnham, M. D. . . *Medical Inspector.*
Office Hours: 8 A. M. to 4 P. M.
Rooms 25 and 26, City Hall. Telephone 345.

POLICE DEPARTMENT.

Lothrop J. Cloyes, . . . *Chief of Police.*
Office Hours: 8 A. M. to 6 P. M.
Office at Central Square Building. Telephone 423.

STREET DEPARTMENT.

Charles A. Brown, . . . *Supt. of Streets.*
Office Hours: 8 A. M. to 4 P. M.
Office, Room 12, City Hall. Telephone 435.

INSPECTION OF MILK AND VINEGAR DEPARTMENT.

FRANK A. DUNBAR, M. D. . . { *Inspector of Milk.* / *Inspector of Vinegar.*

Office Hours: Mondays, Wednesdays and Fridays, 9.30 to 11.30 A. M.
Office, Room 27, City Hall. Telephone 507.

ASSESSORS' DEPARTMENT — BOARD OF ASSESSORS.

Term, three years.

JOHN M. DAVIS, *Secretary* . . Term expires 1900.
ANDREW J. GREEN . . . Term expires 1901.
JOSHUA G. GOOCH, *Chairman* . Term expires 1902.

Office Hours: 8 A. M. to 3 P. M.
Office, Rooms 21 and 22, City Hall. Telephone 244.

CITY ELECTRICAL DEPARTMENT.

CHARLES F. HOPEWELL . . *City Electrician.*

Office Hours: 8 A. M. to 2 P. M.
Office, Room 20, City Hall. Telephone 125.

INSPECTION OF ANIMALS DEPARTMENT.

CHARLES E. HADCOCK, M.D.V., *Inspector of Animals.*

Residence, 21 Ellery Street. (No office or hours.)

BRIDGE DEPARTMENT.

WILLIAM J. MARVIN, *Bridge Commissioner and Harbor Master.*

Residence, 58 Trowbridge Street. (No office or hours.)

CEMETERY DEPARTMENT. — CEMETERY COMMISSIONERS.

GEORGE S. SAUNDERS . . . *Chairman.*

Term, three years.

NATHAN C. LOMBARD . . . Term expires 1901.
JOHN H. H. MCNAMEE . . Term expires 1901.
HERBERT A. CHASE . . . Term expires 1902.
GEORGE S. SAUNDERS . . . Term expires 1902.
WILLIAM A. BERTSCH . . . Term expires 1903.
CHARLES O. WELCH . . . Term expires 1903.

EDWARD J. BRANDON . . . *Clerk of the Board.*
CHARLES S. CHILDS . . . *Supt. of Cemetery.*

Office Hours: at Cemetery, 8 A. M. to 5 P. M.
Office, at Cemetery on Coolidge Avenue. Telephone 25–3.

SCHOOL COMMITTEE.

EDGAR R. CHAMPLIN, Mayor . *Chairman ex officio.*

Term, three years.

Ward One.

WILLIAM TAGGARD PIPER . .	Term expires 1900.
CHARLES H. THURSTON . .	Term expires 1901.
FRANK W. TAUSSIG . . .	Term expires 1902.

Ward Two.

CAROLINE L. EDGERLY . . .	Term expires 1900.
GEORGE W. BICKNELL . . .	Term expires 1901.
ROBERT O. FULLER . . .	Term expires 1902.

Ward Three.

PHILIP M. FITZSIMMONS . .	Term expires 1900.
CARRIE S. FAIRBAIRN . . .	Term expires 1901.
EDWARD B. MALLEY . . .	Term expires 1902.

Ward Four.

CHARLES F. WYMAN . . .	Term expires 1900.
ROBERT E. ELY	Term expires 1901.
MARY E. MITCHELL . . .	Term expires 1902.

Ward Five.

CAROLYN P. CHASE . . .	Term expires 1900.
FREDERIC W. TAYLOR . . .	Term expires 1901.
SETH N. GAGE	Term expires 1902.

Secretary and School Supply Agent.

SANFORD B. HUBBARD.

Superintendent of Schools.

FRANCIS COGSWELL.

Office Hours: 8.30 A. M. to 5 P. M.

Office, Rooms 13, 14, 15, City Hall. Telephone 445.

SEALER OF WEIGHTS AND MEASURES DEPARTMENT.

ALBERT F. ROBERTS . . . *Sealer of Weights and Measures.*

Office Hours: { Fridays, 8 A. M. to 4 P. M.
Saturdays, 8 A. M. to 12 M.

Office, Room 34, City Hall. Telephone 507.

CITY PHYSICIAN.

LEWIS L. BRYANT.

Residence, 930 Massachusetts Avenue. Telephone 522–2.

PUBLIC LIBRARY DEPARTMENT — TRUSTEES OF CAMBRIDGE PUBLIC LIBRARY.

WILLIAM TAGGARD PIPER . .	*President.*

For one year.

WILLIAM T. PIPER, of School Committee.

Citizens at large. Term, three years.

THOMAS W. HIGGINSON . .	Term expires 1901.
EDWARD C. WHEELER . . .	Term expires 1901.
ALBERT M. BARNES . . .	Term expires 1902.
JABEZ FOX	Term expires 1902.
AUGUSTINE J. DALY . . .	Term expires 1903.
WILLIAM J. ROLFE . . .	Term expires 1903.

WILLIAM L. R. GIFFORD . .	*Secretary and Treasurer.*
WILLIAM L. R. GIFFORD . .	*Librarian.*

Library Open: 10 A. M. to 8 P. M.

Reading Room: 10 A. M. to 10 P. M.

Sunday: 2 to 10 P. M.

Office, at Library Building, Broadway, Irving and Trowbridge Streets. Telephone 610.

WATER WORKS DEPARTMENT — CAMBRIDGE WATER BOARD.

WILLIAM B. DURANT . . .	*President.*

Term, five years.

GEORGE H. HOWARD . . .	Term expires 1900.
WILLIAM B. DURANT . . .	Term expires 1901.
STILLMAN F. KELLEY . . .	Term expires 1902.
WELLINGTON FILLMORE . .	Term expires 1903.
EDMUND H. STEVENS, M. D. .	Term expires 1904.

WALTER H. HARDING . .	*Clerk of the Board.*
EDWIN C. BROOKS . . .	*Sup't of Water Works.*
WALTER H. HARDING . . .	*Water Registrar.*

Office Hours: 8 A. M. to 4 P. M.

Office, Rooms 5 and 6, City Hall. Telephone 430.

REGISTRARS OF VOTERS.

James Cox . . . . . *Chairman.*

Term, four years.

William J. Breen . . .	Term expires 1900.
Isaac S. Pear	Term expires 1901.
Frederick W. Macdonald . .	Term expires 1902.
James Cox	Term expires 1903.

Isaac S. Pear . . . . . *Clerk.*

FENCE VIEWERS.

Colin Chisholm	343½ Broadway.
Lewis M. Hastings . . .	City Hall.
William H. Gray . . .	City Hall.

PARK DEPARTMENT — PARK COMMISSIONERS.

George Howland Cox . . *President.*

Term, three years.

Edmund Reardon . . .	Term expires 1900.
George Howland Cox . .	Term expires 1901.
William M. Richardson . .	Term expires 1902.

Howard E. Whiting, *Clerk of the Board and General Superintendent.*

Office Hours: 8 A. M. to 4 P. M.

Office, Room 10, City Hall. Telephone 650.

SINKING FUND DEPARTMENT — COMMISSIONERS OF THE SINKING FUNDS.

Charles H. Saunders . . . *Chairman.*

Term, three years.

Andrew J. Lovell . . .	Term expires 1900.
J. Henry Russell . . .	Term expires 1900.
Frank A. Allen	Term expires 1901.
Charles H. Saunders . .	Term expires 1901.
John C. Bullard . . .	Term expires 1902.
George H. Howard . . .	Term expires 1902.

John McDuffie . . . . *Secretary.*

William W. Dallinger . . *Treasurer.*

OVERSEERS OF THE POOR DEPARTMENT — OVERSEERS OF THE POOR.

WILLIAM W. BURRAGE . . . *Chairman.*

Term, five years.

CHARLES BULLOCK . . .	Term expires 1900.
CHARLES WALKER . . .	Term expires 1901.
STEPHEN ANDERSON . . .	Term expires 1902.
ALEXANDER MILLAN . . .	Term expires 1903.
WILLIAM W. BURRAGE . .	Term expires 1904.

DAVID P. MUZZEY . . . *Secretary.*
VESPASIAN DANFORTH . . . *Visitor.*
MARTIN L. ELDRIDGE, *Superintendent of Almshouse.*

Office Hours (at Central Square Building): 8 A. M. to 4 P. M.

Telephones: { Office, 660. / Almshouse, 29 Arlington.

TRUSTEES OF DOWSE INSTITUTE.

FRANK A. ALLEN . . . . *President.*

EDGAR R. CHAMPLIN . . . *Mayor, ex officio.*
JOHN D. MERRILL, *President of Common Council, ex officio.*
GEORGE HOWLAND COX . . WILLARD A. BULLARD.
FRANK A. ALLEN.

GEORGE HOWLAND COX . . *Secretary.*

TRUSTEES OF SINKING FUNDS OF WATER LOAN.

EDGAR R. CHAMPLIN . . . *Mayor,*
JOHN D. MERRILL . . . *President of Common Council,*
WILLIAM W. DALLINGER . . *City Treasurer.*
Ex officiis.

TRUSTEES OF THE { SANDERS TEMPERANCE FUND. / BRIDGE CHARITABLE FUND.

The Mayor, the President of the Board of Aldermen, and the President of the Common Council,

Ex officiis.

POLICE DEPARTMENT.

Chief of Police.

LOTHROP J. CLOYES.

Deputy Chief.

WILLIAM F. BATCHELDER.

Clerk.

CHARLES W. PRIEST.

Captains of Police.

DISTRICT I.	DISTRICT II.	DISTRICT III.
MARK J. FOLSOM.	FREDERICK B. PULLEN.	JOHN F. MURRAY.

Chief Inspector.

Capt. JAMES E. MURRAY.

Assisstant Inspector.

Lieut. HENRY C. JONES.

Sergeants of Police.

DISTRICT I.	DISTRICT II.	DISTRICT III.
DANIEL CALLAHAN.	JAMES S. ALEXANDER.	CHARLES L. PIKE.
DAVID A. STEVENS.	MICHAEL J. CONRY.	WILLIAM MULLETT.

Patrolmen.

(With Badge and Hat Numbers.)

DISTRICT I.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
51	Aylward, Richard H.	123	67	Leahy, Denis F.	105
7	Barrington, George T.	107	44	Marston, Charles C.	130
28	Belcher, Edward F.	128	55	Maloy, John P.	126
53	Blen, Elbridge S.	113	10	McBride, John J.	110
69	Brennan, Michael J.	131	27	McCann, Charles J.	141
22	Campbell, Thomas M.	122	1	McCrehan, John E.	101
20	Corcoran, Timothy	120	18	McNulty, James E.	118
25	Comerford, Edward J.	125	45	Murray, Patrick F.	133
66	Cox, James A.	119	85	Presho, Charles H.	109
40	Doyle, Patrick	112	83	Rice, Ralph R.	136
8	Furbush, Joseph H.	108	62	Roper, Bernard J.	134
2	Graves, William H.	102	21	Smyth, George	121
49	Hiscock, Simon D.	140	24	Temple, Joseph C.	124
47	Hixon, Robert T.	104	42	Wells, John H.	114
58	Holt, James H. H.	111	80	Welch, Edward J.	127
17	Jewett, Dexter	117	3	White, Orrin B.	103
32	Keaney, James M.	132	48	Winslow, John E.	115
35	Ladd, Fred. L.	135			

DISTRICT II.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
56	Coulter John	203	72	McCaffrey, Bernard	215
34	Culhane, Michael	216	26	McElroy, James L.	226
68	Deehan, John W.	202	13	McKeen, Benjamin	213
50	Dynan, Thomas F.	222	15	McKeown, William	230
86	Ellis, Frederick M.	232	64	McMennimen, William H.	218
74	Forristall, James B.	207	43	Mullen, Robert E.	210
38	Ginty, Michael A.	209	4	Neilan, Michael	204
81	Gordon, Herbert	211	89	Parks, Joseph W.	205
41	Griffiths, John J.	225	59	Real, Thomas J.	229
82	Hackett, Mortimer M.	208	70	Robinson, Frederick A.	217
77	Hezlitt, John A.	221	31	Robertson, William H.	231
14	Higgins, Benjamin F.	214	73	Rowe, Thomas P.	220
95	Hill, William H.	233	78	Rowe, William H.	201
33	Howe, William H. H.	212	65	Shaughnessy, John E.	206
23	Law, Frederick W.	223	61	Sullivan, Cornelius	227
88	Mahoney, Geo. J.	234	54	Wiley, John	224
16	McCabe, Edward J.	228			

DISTRICT III.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
60	Aberle, Charles F.	303	39	McCorry, Joseph F.	304
5	Apel, Frederick	305	76	Mullins, William N.	306
71	Counihan, Daniel F.	312	75	Mulvaney, Simon J.	318
9	Hall, James P.	309	19	Scully, Benjamin C.	307
37	Hurley, Patrick F.	310	46	Scobey, Frank W.	301
87	Kelleher, John	313	63	Skelley, John W.	308
30	McCarthy, Jeremiah	314	57	Walsh, David F.	316

Reserve Officers.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
243	Walsh, David L.	92	91	Leahy, Timothy F.	139
36	Dunlea, Patrick F.	136	93	Neilan, John P.	144
79	Wyman, Charles W.	137	96	McFadden, Richard M.	213
94	Deihl, Anton B.	315	11	Horrigan, Edward F.	138
98	Aberle, William H.	142			

Drivers of Patrol Wagons.

DISTRICT II.	DISTRICT III.
John T. Cook.	John Sullivan.
John McCauley.	John Coffey.

Ambulance Drivers.

Dow, Warren H.	Sherman, George E.

Matrons.

Mrs. E. S. Haines. Mrs. A. M. Stearns.

Keeper of Lock-ups.

Lothrop J. Cloyes.

Person to receive Information of Damages by Dogs.

(Ch. 454, Acts 1889.)

Lothrop J. Cloyes.

TRUANT OFFICERS.

Lucian S. Cabot.
John Carmichael.
Jeremiah Murphy.
William H. Porter.

CONSTABLES.

James A. Brown.
Stephen V. A. Carey.
George S. Clabburn.
James H. Cox.
John Foster.
Joseph Fox.
Frank H. Hager.
Walter F. Hayward.
Warren Ivers.
Joseph James.
Frank H. Lambert.
James E. Lennon.
John T. Lynch.
John F. Murphy.
John J. Rafferty.
Frank E. Shaw.
Thomas R. Sheridan.
Arthur M. Stewart.
Frank H. Wait.

UNDERTAKERS.

Stephen Anderson.
David F. Corcoran.
John W. Coveney.
Daniel P. Danehy.
Edwin L. Derby.
John R. Derby.
Arthur S. Fudge.
David Fudge.
Edward J. Fudge.
George H. Kelley.
Allen J. Litchfield.
Horace D. Litchfield.
Judson Litchfield.
John J. Loan.
C. Henry Lockhart.
Abiel E. Long.
George W. Long.
James F. Mullen.
John J. Murphy.
David J. Nelligan.
George F. Ricker.
John J. Ross.
William Ross, Jr.
Daniel P. Shea.
James J. Shea.
John T. Shea.
Michael J. Shea.
Ralph Smith.
William Stinson.
William A. Taylor.
Benjamin F. Wyeth.
Henry A. Wyeth.

AUCTIONEERS.

John J. Ahern.
Robert C. Baxter.
Daniel A. Buckley.
Wilbur S. Clarke.
John W. Coveney.
Patrick Crowley.
Henry J. Cunningham.
Watson G. Cutter.
Jeremiah F. Donovan.
William R. Ellis.
Paul Epstein.
Max Frankenstein.
William L. Frankenstein.
Leander M. Hannum.
Edward R. Harris.
Stephen H. Harrington.
Frank L. Howe.
F. Louis John.
John A. Kelleher.
William Kelley.
Samuel R. Knights.
George B. Kneeland.
Frank H. Lambert.
Frank M. Lawrence.
James E. Lennon.
John T. Lynch.
Henry L. Marcy.
John B. McKenna.
John F. Murphy.
Henry C. H. Parker.
Charles L. Phillips.
Timothy A. Scott.
Thomas C. Scottron.
Frank E. Shaw.
Fred W. Sleeper.
Thomas W. Spencer.
Francis Traynor.
Walter C. Wardwell.
Bartholomew M. Young.

FIELD DRIVERS.

Charles F. Aberle.
William H. Aberle.
Richard H. Aylward.
Frederick Apel.
George T. Barrington.
Edward F. Belcher.
Elbridge S. Blen.
Michael J. Brennan.
Thomas M. Campbell.
Timothy Corcoran.
James A. Cox.
John Coulter.
Michael Culhane.
Edward J. Comerford.
Daniel F. Counihan.
Anton B. Deihl.
John W. Deehan.
Patrick Doyle.
Patrick F. Dunlea.
Thomas F. Dynan.
Frederick M. Ellis.
James B. Forristall.
Joseph H. Furbush.
Michael A. Ginty.
Herbert Gordon.
William H. Graves.
John J. Griffiths.
Mortimer M. Hackett.
James P. Hall.
John A. Hezlitt.
Benjamin F. Higgins.
William H. Hill.
Simon D. Hiscock.
Robert T. Hixon.

James H. H. Holt.
Edward F. Horrigan.
William H. H. Howe.
Patrick F. Hurley.
Dexter Jewett.
James M. Keaney.
John Kelliher.
Fred L. Ladd.
Frederick W. Law.
Dennis F. Leahy.
Timothy F. Leahy.
George J. Mahoney.
Charles C. Marston.
John P. Maloy.
Edward J. McCabe.
Bernard McCaffrey.
John J. McBride.
Joseph F. McCorry.
Jeremiah McCarthy.
John E. McCrehan.
Charles J. McCann.
James L. McElroy.
Richard M. McFadden.
William F. McKeown.
William H. McMenimen.
James E. McNulty.
Robert E. Mullen.
William N. Mullins.
Simon J. Mulvaney.
Patrick F. Murray.
John P. Neilan.
Michael Neilan.
Joseph W. Parks.
Charles H. Presho.
Thomas J. Real.
Ralph R. Rice.
Bernard J. Roper.
Frederick A. Robinson.
William H. Robertson.
Thomas P. Rowe.
William H. Rowe.
Frank W. Scobey.
Benjamin C. Scully.
John E. Shaughnessy.
John W. Skelley.
George Smyth.
Cornelius Sullivan.
Joseph C. Temple.
David H. Walsh.
Edward J. Welch.
John H. Wells.
Orrin B. White.
John Wiley.
John E. Winslow.
Charles W. Wyman.

MEASURERS OF WOOD AND BARK.

Robert D. Carter.
Ernest P. Cook.
Herbert T. Lawrence.
Robert A. Parry.
David C. Proudfoot.
Joseph P. Quilty.
George Stephens.

POUND KEEPER.

Robert Holden.

COMMITTEE FOR THE PRESERVATION OF FISH.

Edwin C. Brooks.
Lewis M. Hastings.
Theodore L. Pike.

WEIGHERS OF COAL.

Clarence G. Bartlett.
Eugene A. F. Bartnett.
Hiram W. Brooks.
Silas E. Buck.
Arthur Burgess.
Robert D. Carter.
James W. Coleman.
Ernest P. Cook.
Warren Crane.
B. Otis Danforth.
Stanley Jennison.
Harry W. Marston.
John Moynahan.
Walter H. Nay.
Winslow S. Pierce.
David Proudfoot.
David C. Proudfoot.
George H. Rugg.
George M. Smith.
Leslie M. Snow.
Charles Turner.

INSPECTORS OF JUNK SHOPS, PAWNBROKERS' SHOPS, AND SECOND-HAND STORES AND DEALERS.

Mark J. Folsom.
John F. Murray.
James E. Murray.
Frederick B. Pullen.

PUBLIC WEIGHERS.

Robert C. Bird.
Ernest E. Bradbury.
Edward J. Carroll.
Isaac A. Chandler.
Edward B. Dale.
Arthur B. Dodge.
James A. Ferguson.
Alexander S. Ford.
John M. Guiney.
Robert Holden.
Nathan H. Holbrook.
Edward F. Mahady.
William Maloney.
Fred W. McFarland.
Melvin McFarland.
John F. Reilly.
William C. Reycroft.
Thomas H. Shea.
John M. Thayer.

HAY WEIGHER.

Edmund I. Train.

INSPECTOR OF PRESSED OR BUNDLED HAY OR STRAW.

Harvey O. Titus.

MEASURER OF GRAIN.

Albert F. Roberts.

PERSON

To seize all baskets, measures or vessels used or intended to be used in measuring charcoal, as provided in Sect. 88, Chap. 60, P. S.

Albert F. Roberts.

MEASURER AND SURVEYOR.

Henry L. Hale.

SURVEYORS OF MECHANICS' WORK.

Hosea W. Leach.
Charles A. Mason.

PERSONS TO CAUSE TO BE PROPERLY INTERRED THE BODIES OF SOLDIERS AND SAILORS.

John Donelan.
Eben W. Pike.
William H. Eveleth.
Alphonzo M. Lunt.

ASSISTANT ASSESSORS.

Ward 1. Warren Ivers.
Ward 2. George H. Munroe.
Ward 3. Daniel B. Shaughnessy.
Ward 4. *Arthur M. Stewart.
†Edward A. Barnard.
Ward 5. Robert A. Parry.

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*Resigned.
† Appointed March 3, 1900.

STATE AND CITY ELECTIONS

HELD

NOVEMBER 7, 1899, DECEMBER 12, 1899

RESPECTIVELY

VOTES CAST FOR GOVERNOR, COUNCILLOR, SENATORS, SHERIFF, COUNTY COMMISSIONER AND REPRESENTATIVES IN THE GENERAL COURT, FOR CITY OFFICERS, ON THE QUESTION OF ACCEPTING THE EIGHT HOUR LAW, AND ON THE LICENSE QUESTION

STATE ELECTION

CANDIDATES FOR

Names of Candidates.	Whole Number.	Governor. Albert B. Coats.	Governor. W. Murray Crane.	Governor. Robert Treat Paire, Jr.	Governor. George R. Peare.	Governor. Winfield P. Porter.	Governor. Scattering.	Governor. Blank.	Councillor. Oliver H. Durrell.	Councillor. John W. Lucas.	Councillor. Scattering.	Councillor. Blank.
Ward 1, Precinct 1.	243	3	136	81	2	5	3	13	157	65	2	19
" 1, " 2.	256	7	147	92	3	1	....	6	160	72	1	23
" 1, " 3.	219	.....	50	150	4	1	....	14	57	135	....	27
" 1, " 4.	189	2	145	35	2	....	....	5	152	26	....	11
" 1, " 5.	318	11	218	72	5	2	....	10	245	50	....	23
Ward 1, Totals.	1,225	23	696	430	16	9	3	48	771	348	3	103
Ward 2, Precinct 1.	667	6	108	412	23	16	....	102	120	335	....	212
" 2, " 2.	434	9	150	201	21	4	....	49	178	176	....	80
" 2, " 3.	280	4	89	131	9	4	....	43	90	105	....	85
" 2, " 4.	334	13	192	99	11	1	....	18	210	80	....	44
" 2, " 5.	359	8	284	56	4	2	....	5	318	35	....	6
" 2, " 6.	379	8	117	206	9	4	....	35	152	155	....	72
" 2, " 7.	511	12	280	182	2	3	....	32	336	129	....	46
Ward 2, Totals.	2,964	60	1,220	1,287	79	34	....	284	1,404	1,015	....	545
Ward 3, Precinct 1.	240	4	62	146	9	5	....	14	72	138	....	30
" 3, " 2.	324	1	82	193	20	7	....	21	96	168	1	59
" 3, " 3.	269	3	40	194	4	4	....	24	44	182	1	42
" 3, " 4.	288	1	58	182	19	3	....	25	71	171	....	46
Ward 3, Totals.	1,121	9	242	715	52	19	....	84	283	659	2	177
Ward 4, Precinct 1.	142	8	76	43	9	2	....	4	92	37	....	13
" 4, " 2.	149	5	106	29	4	3	....	2	113	25	.	11
" 4, " 3.	143	5	70	57	3	2	....	6	78	56	....	9
" 4, " 4.	262	12	196	46	.....	....	..	8	214	30	....	18
" 4, " 5.	170	13	124	21	3	2	....	7	140	20	....	10
" 4, " 6.	235	10	186	32	1	2	....	4	198	22	1	14
" 4, " 7.	172	2	86	72	5	6	....	1	93	63	....	16
" 4, " 8.	191	11	99	67	6	2	....	6	114	59	1	17
Ward 4, Totals.	1,464	66	943	367	31	19	....	38	1,042	312	2	108
Ward 5, Precinct 1.	233	3	193	20	14	1	....	2	202	24	....	7
" 5, " 2.	245	6	121	106	3	2	....	7	139	86	....	20
" 5, " 3.	281	4	193	69	8	....	....	7	212	53	...	16
" 5, " 4.	255	1	78	133	18	1	....	24	102	115	....	38
Ward 5, Totals.	1,014	14	585	328	43	4	....	40	655	278	....	81
Grand Totals.	7,788	172	3,686	3,127	221	85	3	494	4,155	2,612	7	1,014

CANDIDATES FOR

Names of Candidates.	Senator. Second Middlesex.				Senator. Second Suffolk.			County Commissioner.				Sheriff.		
	Edward B. James.	John E Parry.	Scattering.	Blank.	William P. Bryant.	Peter F. Tague.	Blank.	Levi S. Gould.	Joseph V. Schugel.	Scattering.	Blank.	John R. Fairbairn.	Alfred E. Jones.	Blank.
Wd. 1, Prec't 1..	91	134	2	16	.....	.....	.....	187	18	2	36	206	8	29
" 1, " 2..	110	136	....	10	.....	.....	.....	191	15	....	50	210	14	32
" 1, " 3..	160	48	....	11	.....	.....	.....	120	24	....	75	139	24	56
" 1, " 4..	48	134	....	7	.....	.....	.....	163	7	....	19	170	5	14
" 1, " 5..	85	213	....	20	.....	.....	.....	255	16	....	47	266	17	35
Ward 1, Totals...	494	665	2	64	.....	.....	.....	916	80	2	227	991	68	166
Wd. 2, Prec't 1..	379	102	....	186	.....	.....	.....	262	97	....	308	345	80	242
" 2, " 2..	196	160	....	78	.....		.....	240	52	....	142	256	53	125
" 2, " 3..	129	75	....	76	.....	.....	.....	109	30	....	141	134	26	120
" 2, " 4..	112	181	....	41	.....	.....	.....	235	23	....	76	244	27	63
" 2, " 5..	57	289	....	13	.....	.....	.....	307	11	....	41	328	11	20
" 2, " 6..	200	120	....	59	.....	.....	.....	203	40	....	136	245	43	91
" 2, " 7..	188	276	....	47	.....	.....	.....	364	35	....	112	395	39	77
Ward 2, Totals...	1,261	1,203	....	500	.....	.....	.....	1,720	288	....	956	1,947	279	738
Wd. 3, Prec't 1..	.....	.....	....	....	65	151	24	142	34	...	64	163	35	42
" 3, " 2..	.....	.....	....	....	81	198	45	170	50	...	104	205	45	74
" 3, " 3..	.....	.....	....	....	35	207	27	139	48	1	81	162	46	61
" 3, " 4..	.....	.....	....	....	65	194	29	137	59	....	92	172	45	71
Ward 3, Totals...	....	.....	....	....	246	750	125	588	191	1	341	702	171	248
Wd. 4, Prec't 1..	50	84	...	8	.....	.....	.....	95	17	....	30	95	23	24
" 4, " 2..	45	93	....	11	.....	.....	.....	109	22	....	18	116	19	14
" 4, " 3..	65	73	....	5	.....	.....	.....	104	11	....	28	119	8	16
" 4, " 4..	59	193	....	10	.....	.....	.....	215	10	....	37	224	8	30
" 4, " 5..	38	126	....	6	.....	.....	.....	135	11	1	23	137	13	20
" 4, " 6..	37	183	....	15	.....	.....	.....	195	8	...	32	198	11	26
" 4, " 7..	77	81	....	14	.....	.....	.....	119	18	....	35	135	13	24
" 4, " 8..	80	98	....	13	.....	.....	.....	136	19	...	36	145	19	27
Ward 4, Totals...	451	931	....	82	.....	.....	.....	1,108	116	1	239	1,169	114	181
Wd. 5, Prec't 1..	43	180	....	10	.....	.....	.....	203	5	....	25	211	5	17
" 5, " 2..	107	128	....	10	.....	.....	.....	181	22	....	42	197	23	25
" 5, " 3..	54	213	....	14	.....	.....	.....	223	15	....	43	234	19	28
" 5, " 4..	96	141	....	18	.....	.....	.....	150	48	....	57	163	43	49
Ward 5, Totals...	300	662	....	52	.....	.....	.....	757	90	....	167	805	90	119
Grand Totals...	2,506	3,461	2	698	246	750	125	5,089	765	4	1,930	5,614	722	1,452

CANDIDATES FOR REPRESENTATIVES.

Names of Candidates.	1st Middlesex.			2nd Middlesex.						3rd Middlesex.			4th Middlesex.						5th Middlesex.		
	John C. Daley.	James J. Myers.	Blank.	Herman Bird.	James Butler.	William R. Davis.	James A. Montgomery.	Clement G. Morgan.	Blank.	Jonas F. Capelle.	Cornelius Minihan.	Blank.	Daniel S. Coolidge.	Clarence H. Douglass.	Charles P. Keith.	Thomas F. Mahoney.	Scattering.	Blank.	Albert S. Apsey.	Joseph Cogan.	Blank.
Ward 1, Precinct 1.....	67	161	15																		
" 1, " 2.....	89	161	6																		
" 1, " 3.....	147	55	17																		
" 1, " 4.....	27	157	5																		
" 1, " 5.....	54	248	16																		
Ward 1, Totals.....	384	782	59																		
Ward 2, Precinct 1.....				37	296	251	464	82	204												
" 2, " 2.....				53	199	146	241	128	101												
" 2, " 3.....				29	138	100	139	102	52												
" 2, " 4.....				75	84	164	105	161	79												
" 2, " 5				110	30	218	48	233	79												
" 2, " 6.....				49	148	129	213	118	101												
" 2, " 7.....				115	124	248	191	265	79												
Ward 2, Totals.....				468	1,019	1,256	1,401	1,089	695												
Ward 3, Precinct 1.....										63	158	19									
" 3, " 2.....										95	202	27									
" 3, " 3.....										42	210	17									
" 3 " 4.....										58	210	20									
Ward 3, Totals.....										258	780	83									
Ward 4, Precinct 1.....													83	42	77	35		47			
" 4, " 2.....													94	31	95	26		52			
" 4, " 3.....													73	50	62	44		57			
4, " 4.....													192	38	185	32		77			
" 4, " 5													137	26	126	17	2	32			
" 4, " 6.....													186	23	179	11		71			
" 4, " 7.....													87	57	79	61		60			
" 4, " 8.....													102	58	90	56	3	73			
Ward 4, Totals.....													954	325	893	282	5	469			
Ward 5, Precinct 1.....																			189	33	11
" 5, " 2.....																			133	93	19
" 5, " 3.....																			205	56	20
" 5 " 4.....																			109	119	27
Ward 5, Totals...																			636	301	77

CITY ELECTION

DECEMBER 12, 1899

Votes cast for City Officers, on the License Question, and on the Question of Pensioning Firemen.

Ward and Precinct.	Mayor					License			Accepting Chap. 344, Acts of 1899		
	Whole Number.	Edgar R. Champlin.	David T. Dickinson.	Socialist Labor, and Scattering.	Blank.	Yes.	No.	Blank.	Yes.	No.	Blank.
Ward 1, Precinct 1	397	188	201	1	7	136	214	47	213	91	93
" 1, " 2	380	174	197	4	5	139	208	33	212	84	84
" 1, " 3	372	113	243	4	12	235	116	21	297	28	47
" 1, " 4	301	200	94	3	4	55	225	21	153	84	64
" 1, " 5	461	272	169	8	12	86	346	29	232	127	102
Ward 1, Totals	1,911	947	904	20	40	651	1,109	151	1,107	414	390
Ward 2, Precinct 1	722	271	404	13	34	464	157	101	545	27	150
" 2, " 2	498	249	218	23	8	249	202	47	349	46	103
" 2, " 3	293	141	131	11	10	169	80	44	188	15	90
" 2, " 4	393	248	126	9	10	125	231	37	254	66	73
" 2, " 5	427	317	96	1	13	71	338	18	229	129	69
" 2, " 6	420	207	193	10	10	162	215	43	302	28	90
" 2, " 7	609	344	248	5	12	161	418	30	367	135	107
Ward 2, Totals	3,362	1,777	1,416	72	97	1,401	1,641	320	2,234	446	682
Ward 3, Precinct 1	410	196	194	4	16	248	89	73	285	29	96
" 3, " 2	494	215	237	15	27	305	128	61	357	42	95
" 3, " 3	424	172	241	3	8	288	87	49	325	23	76
" 3, " 4	413	178	215	12	8	267	96	50	293	28	92
Ward 3, Totals	1,741	761	887	34	59	1,108	400	233	1,260	122	359
Ward 4, Precinct 1	247	163	73	2	9	93	129	25	175	23	49
" 4, " 2	244	161	68	8	7	79	143	22	152	38	54
" 4, " 3	255	129	113	7	6	96	133	26	167	29	59
" 4, " 4	373	241	121	1	10	69	280	24	200	87	86
" 4, " 5	288	190	91	1	6	84	186	18	193	37	58
" 4, " 6	357	266	81	6	4	66	267	24	195	75	87
" 4, " 7	307	149	152	1	5	121	165	21	213	31	63
" 4, " 8	301	149	138	8	6	111	156	34	201	41	59
Ward 4, Totals	2,372	1,448	837	34	53	719	1,459	194	1,496	361	515
Ward 5, Precinct 1	311	172	137	....	2	35	257	19	135	100	76
" 5, " 2	402	146	242	....	14	163	201	38	250	73	79
" 5, " 3	411	242	159	2	8	86	289	36	233	80	98
" 5, " 4	394	128	219	16	31	182	153	59	284	29	81
Ward 5, Totals	1,518	688	757	18	55	466	900	152	902	282	334
Grand Totals	10,904	5,621	4,801	178	304	4,345	5,509	1,050	6,999	1,625	2,280

Names of Candidates.	CANDIDATES FOR ALDERMEN.																							ASSESSOR.			
	John J. Ahern.	Stephen Anderson.	Louis F. Baldwin.	Christian Beck.	William F. Brooks.	Hans L. Carstein.	John W. Coveney.	George J. Cragan.	Jeremiah F. Donovan.	William E. Doyle.	Fred A. Ferris.	Eben H. Googins.	Charles W. Henderson.	Alfred E. Hughes.	Albert B. Long.	Isaac McLean.	George Ohse.	Hamilton H. Perkins.	George E. Saunders.	John T. Shea.	John E. Smith.	William E. Stacey.	Walter C. Wardwell.	George B. Whitmore.	Scattering.	Blank.	Joshua G. Gooch.	Scattering.	Blank.
WARD 1.																													
Precinct 1.....	225	53	64	20	332	227	115	14	188	149	35	141	56	128	191	219	8	191	251	170	129	23	256	43	...	1,139	265	...	132
" 2.....	193	56	69	26	286	209	114	21	169	151	35	128	55	118	181	213	14	189	248	158	124	30	297	62	...	1,034	248	...	132
" 3.....	248	62	44	23	225	105	85	28	236	112	53	87	44	100	75	120	18	87	148	208	81	49	189	42	...	1,623	166	...	206
" 4.....	104	43	50	19	223	197	125	13	78	155	23	145	64	91	181	185	9	187	210	68	129	16	243	64	...	689	237	...	64
" 5. ...	152	69	87	22	338	307	188	14	122	228	40	217	72	116	275	287	13	279	322	110	177	24	359	75	2	1,176	347	...	114
Ward 1 Totals.	922	283	314	110	1,404	1,045	627	90	793	795	186	718	291	553	903	1,024	62	933	1,179	714	640	142	1,344	286	2	5,661	1,263	...	648
WARD 2																													
Precinct 1.....	429	344	84	79	196	169	278	71	455	308	68	111	64	136	143	184	51	115	116	383	219	62	168	40	...	3,669	285	...	437
" 2.....	269	133	103	71	212	196	170	47	282	208	66	141	76	106	156	163	44	147	138	229	162	51	184	55	2	2,067	264	...	234
" 3.....	147	69	67	32	99	70	88	28	185	119	32	55	40	65	60	55	21	54	55	130	84	28	75	24	...	1,541	108	...	185
" 4.....	158	79	77	41	230	187	139	27	153	159	61	181	104	100	194	158	12	197	179	119	150	23	220	72	1	1,302	259	...	134
" 5.....	109	58	78	13	332	312	202	7	97	237	58	278	91	125	302	276	4	308	296	70	221	16	338	90	1	778	362	...	65
" 6.....	214	122	78	50	190	155	132	40	212	196	51	114	65	105	146	147	20	130	163	171	196	33	172	49	...	1,729	207	...	213
" 7.....	256	133	116	53	387	319	253	36	252	328	71	274	117	168	325	305	29	305	327	182	285	38	381	107	1	1,651	432	...	177
Ward 2 Totals.	1,582	938	603	339	1,646	1,408	1,262	256	1,636	1,555	407	1,154	557	805	1,326	1,288	181	1,256	1,214	1,284	1,317	251	1,538	437	5	12,737	1,917	...	1,445

WARD 3.																													
Precinct 1.....	235	147	53	38	134	126	167	37	210	157	29	68	39	70	75	99	24	75	111	257	90	31	130	34	...	2,074	144	...	266
" 2.....	285	199	64	55	153	156	190	34	267	200	34	100	55	75	96	119	24	96	128	261	112	37	142	35	1	2,516	183	...	311
" 3.....	278	157	39	28	127	100	180	29	257	181	31	90	39	67	59	96	15	70	85	233	90	23	105	24	...	2,261	149	...	275
" 4.....	248	165	44	60	129	108	200	49	216	173	29	73	38	65	70	80	35	82	94	217	93	53	108	26	...	2,088	171	...	242
Ward 3 Totals.	1,046	668	200	181	543	490	737	149	950	711	123	331	171	277	300	394	98	323	418	968	385	144	485	119	1	8,939	647	...	1,094
WARD 4.																													
Precinct 1.....	93	52	64	47	122	108	84	26	92	73	39	107	57	81	88	80	21	114	93	74	101	31	126	53	...	891	149	...	98
" 2.....	79	37	40	35	143	119	92	17	77	103	49	147	82	82	98	96	15	118	113	60	103	21	134	52	...	772	152	1	91
" 3.....	140	52	37	27	138	91	67	22	118	89	35	115	107	88	79	79	8	109	84	123	92	20	123	58	...	904	137	...	118
" 4.....	119	57	82	28	221	202	115	17	93	129	38	209	214	126	190	172	12	217	195	89	164	33	225	142	...	972	260	...	113
" 5.....	92	66	74	33	173	142	98	16	75	102	37	168	122	122	143	124	10	160	142	70	101	22	187	113	1	775	199	...	89
" 6.....	67	56	74	25	238	208	145	17	66	138	68	248	120	167	201	167	15	243	201	44	144	32	244	121	1	877	272	...	85
" 7.....	168	50	44	15	166	109	99	19	169	122	34	145	66	114	105	103	9	120	108	142	126	19	143	46	...	1,137	175	...	132
" 8.....	142	40	57	29	153	133	74	18	143	82	50	148	82	141	106	103	13	123	121	127	77	29	151	67	1	1,101	184	...	117
Ward 4 Totals.	900	410	472	239	1,354	1,112	774	151	833	838	350	1,287	850	921	1,010	924	103	1,204	1,057	729	908	207	1,333	652	3	7,423	1,528	1	843
WARD 5.																													
Precinct 1.....	103	38	66	15	256	250	109	12	85	134	27	149	56	101	224	228	6	221	228	80	139	19	254	47	1	573	253	...	58
" 2.....	237	64	63	27	286	260	111	29	219	130	37	118	43	128	177	235	12	188	227	194	126	37	224	44	...	1,206	246	...	156
" 3.....	165	84	59	29	272	311	130	29	139	146	34	158	90	130	201	275	9	204	221	115	130	47	261	71	...	1,211	276	...	135
" 4.....	275	96	48	32	175	185	104	50	251	123	30	74	80	107	91	189	26	96	156	236	66	107	147	30	...	1,560	181	...	213
Ward 5 Totals.	780	282	236	103	989	1,006	454	120	694	533	128	499	269	466	693	927	53	709	832	625	461	210	886	192	1	4,550	956	...	562
Grand Totals..	5,230	2,581	1,825	972	5,936	5,061	3,854	766	4,906	4,432	1,194	3,989	2,138	3,022	4,232	4,557	497	4,425	4,700	4,320	3,711	954	5,586	1,686	12	39,316	6,311	1	4,592

CANDIDATES FOR COMMON COUNCIL.

WARD ONE.

	Stoughton Bell.	Henry P. Fielding.	James D. Hill.	Andrew J. Johnson.	John D. Merrill.	Thorndike Spalding.	Scattering.	Blank.
Precinct 1.....	230	51	189	217	196	259		446
" 2.....	247	62	207	180	202	256	1	365
" 3.....	129	55	195	207	131	139	1	631
" 4.....	218	74	174	167	205	203		223
" 5.....	331	85	248	181	296	310	1	392
Totals.....	1,155	327	1,013	892	1,030	1,167	3	2,057

WARD TWO.

	J. Edward Barry.	William W. Bird.	Thomas B. Dardis.	Thomas H. Heaton.	James J. Malley.	Edward F. McKenna.	William McMasters.	Herbert A. Rhoades.	Joseph E. Sharkey.	William M. Wadden.	Scattering.	Blank.
Precinct 1.	348	143	247	68	363	90	152	106	350	218		1,525
" 2.	167	210	120	112	196	67	125	156	194	220		923
" 3.	96	84	59	53	73	39	138	46	83	85		709
" 4.	120	231	78	80	161	61	75	193	171	196	2	597
" 5.	73	344	40	65	233	37	31	346	240	305		421
" 6.	155	149	128	66	194	75	39	149	237	199		709
" 7.	179	359	104	99	314	93	73	348	326	370	1	779
Total.....	1,138	1,520	776	543	1,534	462	633	1,344	1,601	1,593	3	5,663

WARD THREE.

	James T. Barrett.	James A. Brown.	Frederick A. Gilligan.	Henry F. Lehan.	William H. Murray.	Andrew J. Sullivan.	Scattering.	Blank.
Precinct 1.....	167	214	174	203	105	235		542
" 2.....	255	245	264	252	149	174	1	636
" 3.....	230	189	234	300	108	167		468
" 4.....	238	164	232	214	179	120		505
Total.....	899	812	904	969	541	696	1	2,151

CANDIDATES FOR COMMON COUNCIL — Concluded.

WARD FOUR.

	Fred L. Beunke.	George B. Caswell.	Edward E. Clark.	John F. Danskin.	Timothy W. Good.	Charles R. Greco.	William J. Rounds.	Scattering.	Blank.
Precinct 1.....	171	81	137	118	130	68	131		399
" 2.....	179	78	136	131	124	79	144		349
" 3.....	151	66	132	103	159	110	137		417
" 4.....	275	145	251	209	180	136	270		399
" 5.....	214	122	172	180	171	94	175	1	311
" 6.....	298	164	236	271	146	101	255		314
" 7.....	158	72	140	122	217	108	129	2	587
" 8.....	166	94	132	140	186	111	151	1	524
Total.....	1,612	822	1,336	1,274	1,313	807	1,392	4	3,300

WARD FIVE.

	Albert H. Hall.	Robert Johnson.	William H. Lewis.	John P. Nelligan.	Blank.
Precinct 1.....	260	17	231	23	91
" 2.....	216	35	219	106	228
" 3.....	260	49	232	86	195
" 4.....	109	72	129	236	242
Total.....	845	173	811	451	756

CANDIDATES FOR SCHOOL COMMITTEE.

Ward 1. For 3 yrs.		Ward 2. For 3 years.			Ward 3. For 3 years.				Ward 4. For 3 years.			Ward 5. For 3 yrs.		Ward 1. For 2 years.			Ward 3. For 1 year.		
Frank W. Taussig.	Blank.	Robert O. Fuller.	Scattering.	Blank.	Edward B. Malley.	George H. Tuttle.	Scattering.	Blank.	Mary E. Mitchell.	Scattering.	Blank.	Seth N. Gage.	Blank.	Jenny S. Lansing.	Charles H. Thurston.	Blank.	Philip M. Fitzsimmons.	Scattering.	Blank.
236	166	208		194	130	90		182	200		202	183	219	104	175	123	185		217
244	155	210		189	138	90		171	206		193	192	207	144	168	87	182		217
129	248	112		265	89	67		221	105		272	88	289	47	231	99	124		253
225	84	199		110	125	76		108	194		115	184	125	110	154	45	161		148
354	123	315		162	202	118		157	299		178	284	193	225	155	97	272	2	203
1188	776	1044		920	684	441		839	1004		960	931	1033	630	883	451	924	2	1038
185	539	215		509	171	158		395	179		545	136	588	73	188	463	271		453
204	297	230		271	146	107		248	196		305	168	333	94	112	295	197		304
78	217	93		202	64	43		188	86		209	64	231	32	107	156	79		216
223	177	254		146	122	112		166	229		171	216	184	120	104	176	172		228
339	100	351		88	205	139		95	335		104	317	122	209	138	92	274	1	164
159	265	199		225	120	88		216	170		254	139	285	84	111	229	175		249
367	249	402		214	243	175		198	351		265	330	286	188	240	188	316		300
1555	1844	1744		1655	1071	822		1506	1546		1853	1370	2029	800	1000	1599	1484	1	1914
107	308	105		310	123	136	2	154	109		306	89	326	47	81	287	169	1	245
138	359	124		373	122	150		225	124		373	94	403	66	91	340	216	1	280
108	316	92		332	130	146		148	116		308	79	345	39	94	291	192		232
122	297	114		305	128	98		193	121		298	94	325	56	80	283	195		224
475	1280	435		1320	503	530	2	720	470		1285	356	1399	208	346	1201	772	2	981
120	131	134		117	66	62		123	140		111	88	163	69	70	112	89		162
134	115	135		114	81	74		94	157		92	118	131	83	62	104	96		153
99	158	102		155	68	54		135	111		146	87	170	62	57	138	78		179
235	145	189		191	102	112		166	261		119	222	158	154	93	133	171		209
169	124	187		106	82	96		115	171		122	153	140	98	82	113	116		177
234	136	260	1	109	122	125		123	267		103	222	148	151	102	117	171		199
129	183	136		176	112	52		148	149		163	106	206	77	112	123	128		184
134	172	153		153	81	79		146	156	1	149	124	182	74	101	131	107		199
1254	1164	1296	1	1121	714	654		1050	1412	1	1005	1120	1298	768	679	971	956		1462
251	72	248		75	133	110		80	241		82	255	68	157	108	58	212		111
231	182	216		197	131	125		157	195		218	223	190	123	148	142	195		218
249	172	236		185	134	112		175	220		201	264	157	136	117	168	194		227
135	259	125		269	93	72		229	113		281	149	245	47	105	242	138		256
866	685	825		726	491	419		641	769		782	891	660	463	478	610	739		812
5338	5749	5344	1	5742	3463	2866	2	4756	5201	1	5885	4668	6419	2869	3386	4832	4875	5	6207

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